

Inspection Report For Well: UT20736 - 04535

U.S. Environmental Protection Agency
Underground Injection Control Program, 8ENF-T
999 18th Street, Suite 300, Denver, CO 80202-2466

This form was printed on 9/24/2013

INSPECTOR(S): Lead: Roberts, Sarah

Date: 10/11/2013

Others: Ajayi, Christopher

Time: 11:20 am/pm

OPERATOR (only if different): _____

REPRESENTATIVE(S): Chad Stevenson

PRE-INSPECTION REVIEW

Petroglyph Operating Company, Inc

Well Name: Ute Tribal 19-05

Well Type: Enhanced Recovery (2R)

Operating Status: AC (ACTIVE) as of 12/31/2002

Oil Field: Antelope Creek (Duchesne)

Location: SWNW S19 T5S R3W

Indian Country: X, Uintah and Ouray

Last Inspection: 8/29/2012

Allowable Inj Pressure: 1900 /

Last MIT: Pass 9/29/2010

Annulus Pressure From Last MIT: 1045

BLACK = POSSIBLE VIOLATION

GREY = DATA MISSING

INSPECTION TYPE:
(Select One)

☐ Construction / Workover

☐ Response to Complaint

☐ Other

☐ Plugging

☒ Routine

ICIS Entered

☐ Post-Closure

☐ Witness MIT

Date 1/2/14

OBSERVED VALUES:

Initials DS

Tubing Gauge:

☒ Yes
☐ No

Pressure: U: 1841 / L: _____ psig

Gauge Range: Scada psig

Gauge Owner:

☐ EPA

☒ Operator

Annulus Gauge:

☒ Yes
☐ No

Pressure: 0 psig

Gauge Range: opened psig

Gauge Owner:

☒ EPA

☐ Operator

Bradenhead Gauge:

☐ Yes
☐ No

Pressure: _____ psig

Gauge Range: _____ psig

Gauge Owner:

☐ EPA

☐ Operator

Pump Gauge:

☐ Yes
☐ No

Pressure: _____ psig

Gauge Range: _____ psig

Gauge Owner:

☐ EPA

☐ Operator

Operating Status:
(Select One)

☒ Active
☐ Being Reworked

☐ Not Injecting
☐ Production

☐ Plugged and Abandoned
☐ Under Construction

U2 Entered

Date 12/17/13

Initial DS

See page 2 for photos, comments, and site conditions.



Inspection Report For Well: UT20736 - 04535 (PAGE 2)

PHOTOGRAPHS:


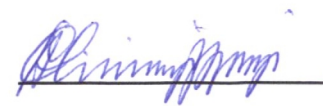
☐ Yes
☒ No

List of photos taken: _____

Comments and site conditions observed during inspection: _____

GPS: GPS File ID: _____

Signature of EPA Inspector(s):

☐ Data Entry

☐ Compliance Staff

☐ Hard Copy Filing

NOTICE OF INSPECTION



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION VIII, 999 18TH STREET - SUITE 500
DENVER, COLORADO 80202-2405

Date: 12/10/13

Notice of inspection is hereby given according to Section 1445(b) of the Safe Drinking Water Act (42 U.S.C. §300f et seq.).

Hour: 8:00a

Firm Name: Petroglyph Operating, Inc.

Firm Address: Roosevelt, UT, Antelope Creek Oil Field

REASON FOR INSPECTION:

For the purpose of inspecting records, files, papers, processes, controls and facilities, and obtaining samples to determine whether the person subject to an applicable underground injection control program has acted or is acting in compliance with the Safe Drinking Water Act and any applicable condition of permit or rule authorization.

SECTION 1445(b) of the SAFE DRINKING WATER ACT is quoted below:

Section 1445(b)(1): Except as provided in Paragraph (2), the Administrator, or representatives of the Administrator duly designated by him, upon presenting appropriate credentials, and a written notice to any supplier of water or other person subject to (a), or person subject (A) a national primary drinking water regulation prescribed under Section 1412(B) an applicable Underground Injection Control Program, or (C) any requirement to monitor an unregulated contaminant pursuant to subsection (a), or person in charge of any of the property of such supplier or other person referred to in clause (A), (B), or (C), is authorized to enter any establishment, ... facility, or other property of such supplier or other person in order to determine whether such supplier or other person has acted or is acting in compliance with this title, including for this purpose, inspection, at reasonable times, of records, files, papers, processes, controls, and facilities, or in order to test any feature of a public water system, including its raw water source. The Administrator or the Comptroller General (or any representative designated by either) shall have access for the purpose of audit and examination to any records, reports, or information of a grantee which are required to be maintained under subsection (a) or which are pertinent to any financial assistance under this title.

Sarah Roberts

Inspector's Name & Title (Print)

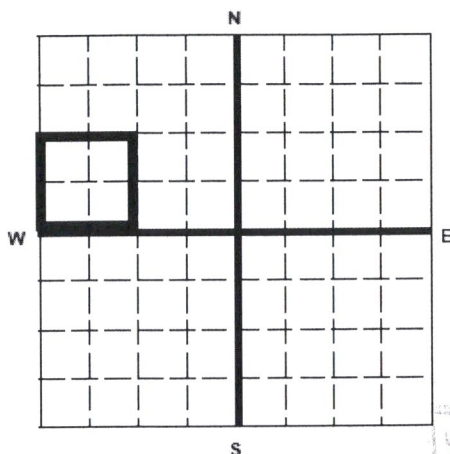
[Signature]
Inspector's Signature


 United States Environmental Protection Agency
 Washington, DC 20460

ANNUAL DISPOSAL/INJECTION WELL MONITORING REPORT

 Name and Address of Existing Permittee
 Petroglyph Operating Company, Inc. 2258
 P.O. Box 7608
 Boise, Idaho 83709

 Name and Address of Surface Owner
 Ute Indian Tribe
 P.O. Box 70
 Ft. Duchesne, Utah, 84026

 Locate Well and Outline Unit on
 Section Plat - 640 Acres

 State
 Utah

 County
 Duchesne

 Permit Number
 UT2736-04535

Surface Location Description

1/4 of 1/4 of SW 1/4 of NW 1/4 of Section 19 Township 5S Range 3W

Locate well in two directions from nearest lines of quarter section and drilling unit

Surface

 Location 2005 ft. from (N/S) N Line of quarter section
 and 658 ft. from (E/W) W Line of quarter section.

U2 Entered

Date 4/4/17

Initial JB

WELL ACTIVITY

- ☐ Brine Disposal
☒ Enhanced Recovery
☐ Hydrocarbon Storage

TYPE OF PERMIT

- ☐ Individual
☒ Area

Number of Wells 111

 GREEN BLUE CBI
 Lease Name Ute Indian Tribe

Well Number UTE TRIBAL 19-05

INJECTION PRESSURE

TOTAL VOLUME INJECTED

 TUBING - CASING ANNULUS PRESSURE
 (OPTIONAL MONITORING)

MONTH	YEAR	AVERAGE PSIG	MAXIMUM PSIG	BBL	MCF	MINIMUM PSIG	MAXIMUM PSIG
January	16	1841	1850	468		0	0
February	16	1852	1860	581		0	0
March	16	1852	1859	538		0	0
April	16	1836	1844	389		0	0
May	16	1854	1867	576		0	0
June	16	1816	1843	416		0	0
July	16	1823	1854	446		0	0
August	16	1821	1844	396		0	0
September	16	1851	1855	582		0	0
October	16	1825	1827	377		0	0
November	16	1812	1828	371		0	0
December	16	1843	1853	682		0	0

Certification

I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. (Ref. 40 CFR 144.32)

Name and Official Title (Please type or print)

Chad Stevenson, Water Facilities Supervisor

Signature

Date Signed

03/21/2017

Units of Measurement: **Standard**

Water Analysis Report

Production Company: **PETROGLYPH OPERATING CO INC - EBUS**Sales Rep: **James Patry**Well Name: **UTE TRIBAL 19-05 INJ, DUCHESNE**Lab Tech: **Kaitlyn Natelli**Sample Point: **Well Head**Sample Date: **1/6/2017**Scaling potential predicted using ScaleSoftPitzer from
Brine Chemistry Consortium (Rice University)Sample ID: **WA-345304**

Sample Specifics		Analysis @ Properties in Sample Specifics			
		Cations		Anions	
		mg/L		mg/L	
Test Date:	1/25/2017	Sodium (Na):	668.20	Chloride (Cl):	650.00
System Temperature 1 (°F):	300	Potassium (K):	6.98	Sulfate (SO ₄):	110.00
System Pressure 1 (psig):	2000	Magnesium (Mg):	23.25	Bicarbonate (HCO ₃):	793.00
System Temperature 2 (°F):	130	Calcium (Ca):	41.71	Carbonate (CO ₃):	
System Pressure 2 (psig):	50	Strontium (Sr):	1.19	Hydroxide (HO):	
Calculated Density (g/ml):	0.9988	Barium (Ba):	2.26	Acetic Acid (CH ₃ COO)	
pH:	7.40	Iron (Fe):	7.67	Propionic Acid (C ₂ H ₅ COO)	
Calculated TDS (mg/L):	2314.61	Zinc (Zn):	1.45	Butanoic Acid (C ₃ H ₇ COO)	
CO ₂ in Gas (%):		Lead (Pb):	0.00	Isobutyric Acid ((CH ₃) ₂ CHCOO)	
Dissolved CO ₂ (mg/L):	59.00	Ammonia (NH ₃):		Fluoride (F):	
H ₂ S in Gas (%):		Manganese (Mn):	0.09	Bromine (Br):	
H ₂ S in Water (mg/L):	0.00	Aluminum (Al):	0.02	Silica (SiO ₂):	8.81
Tot. Suspended Solids (mg/L):		Lithium (Li):	2.63	Calcium Carbonate (CaCO ₃):	
Corrosivity (Langlier Sat. Index):	0.00	Boron (B):	1.14	Phosphates (PO ₄):	2.85
Alkalinity:		Silicon (Si):	4.12	Oxygen (O ₂):	

Notes:

(PTB = Pounds per Thousand Barrels)

		Calcium Carbonate		Barium Sulfate		Iron Sulfide		Iron Carbonate		Gypsum CaSO ₄ ·2H ₂ O		Celestite SrSO ₄		Halite NaCl		Zinc Sulfide	
Temp (°F)	PSI	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
130.00	50.00	0.51	17.47	1.15	1.25	0.00	0.00	1.82	5.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
149.00	267.00	0.59	19.71	1.06	1.23	0.00	0.00	1.94	5.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
168.00	483.00	0.71	22.92	0.99	1.21	0.00	0.00	2.09	5.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
187.00	700.00	0.85	25.87	0.94	1.19	0.00	0.00	2.24	5.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
206.00	917.00	0.99	28.46	0.91	1.18	0.00	0.00	2.38	5.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
224.00	1133.00	1.15	30.61	0.89	1.17	0.00	0.00	2.53	5.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
243.00	1350.00	1.31	32.31	0.89	1.17	0.00	0.00	2.67	5.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
262.00	1567.00	1.47	33.60	0.89	1.17	0.00	0.00	2.80	5.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
281.00	1783.00	1.64	34.53	0.91	1.18	0.00	0.00	2.92	5.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	2000.00	1.81	35.19	0.94	1.19	0.00	0.00	3.04	5.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

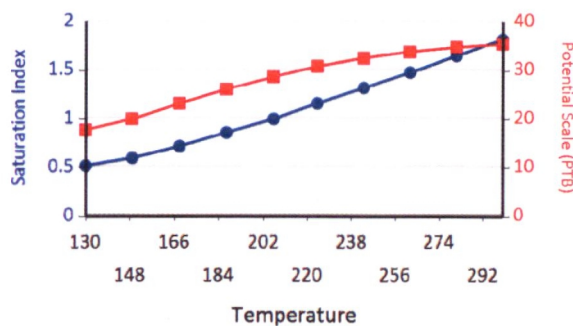
Water Analysis Report

Temp (°F)	PSI	Hemihydrate CaSO ₄ ~0.5H ₂ O		Anhydrate CaSO ₄		Calcium Fluoride		Zinc Carbonate		Lead Sulfide		Mg Silicate		Ca Mg Silicate		Fe Silicate	
		SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
130.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00	0.85	0.83	0.00	0.00	0.00	0.00	0.00	0.00	4.64	5.64
149.00	267.00	0.00	0.00	0.00	0.00	0.00	0.00	1.08	0.89	0.00	0.00	0.00	0.00	0.00	0.00	5.23	5.76
168.00	483.00	0.00	0.00	0.00	0.00	0.00	0.00	1.33	0.93	0.00	0.00	0.17	1.10	0.00	0.00	6.05	5.85
187.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00	1.56	0.95	0.00	0.00	1.24	7.63	0.00	0.00	6.89	5.91
206.00	917.00	0.00	0.00	0.00	0.00	0.00	0.00	1.78	0.96	0.00	0.00	2.30	13.53	0.38	2.37	7.75	5.93
224.00	1133.00	0.00	0.00	0.00	0.00	0.00	0.00	1.98	0.96	0.00	0.00	3.35	18.08	1.02	5.72	8.60	5.95
243.00	1350.00	0.00	0.00	0.00	0.00	0.00	0.00	2.16	0.97	0.00	0.00	4.38	20.87	1.65	8.26	9.46	5.96
262.00	1567.00	0.00	0.00	0.00	0.00	0.00	0.00	2.33	0.97	0.00	0.00	5.39	22.16	2.28	9.92	10.31	5.96
281.00	1783.00	0.00	0.00	0.00	0.00	0.00	0.00	2.49	0.97	0.00	0.00	6.37	22.63	2.88	10.88	11.14	5.96
300.00	2000.00	0.00	0.00	0.00	0.00	0.00	0.00	2.62	0.97	0.00	0.00	7.32	22.78	3.47	11.39	11.95	5.97

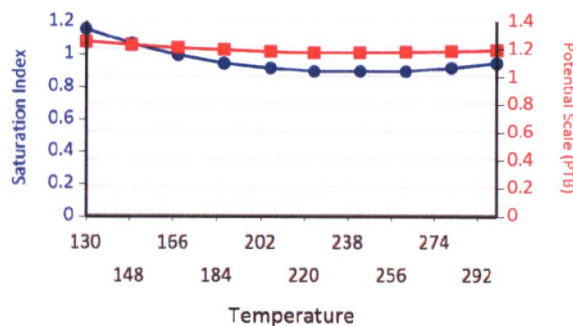
These scales have positive scaling potential under initial temperature and pressure: Calcium Carbonate Barium Sulfate Iron Carbonate Zinc Carbonate Fe Silicate

These scales have positive scaling potential under final temperature and pressure: Calcium Carbonate Barium Sulfate Iron Carbonate Zinc Carbonate Mg Silicate Ca Mg Silicate Fe Silicate

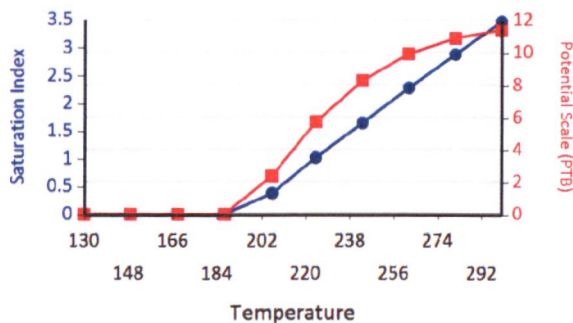
Calcium Carbonate



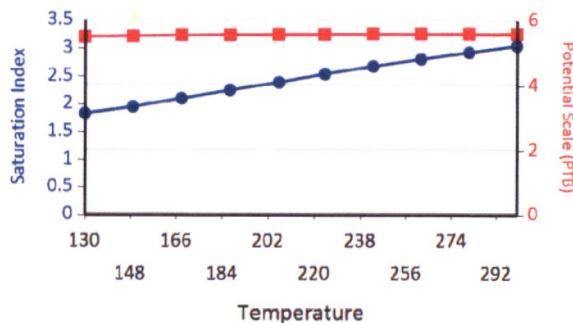
Barium Sulfate



Ca Mg Silicate

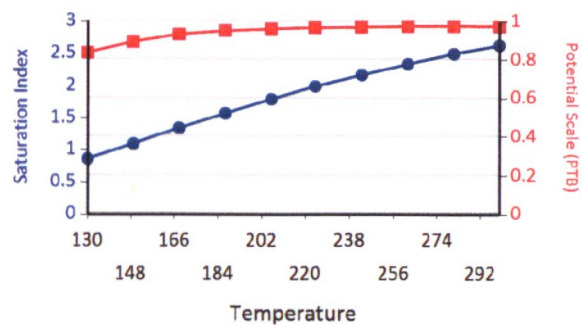


Iron Carbonate

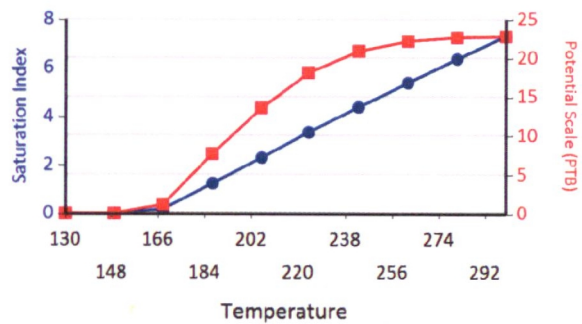


Water Analysis Report

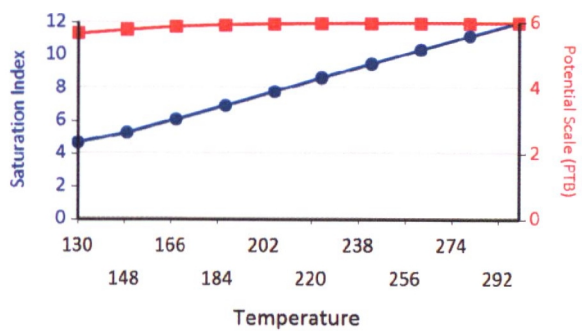
Zinc Carbonate



Mg Silicate



Fe Silicate





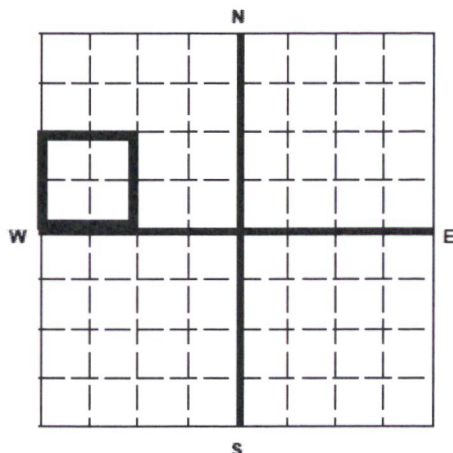
United States Environmental Protection Agency
Washington, DC 20460

ANNUAL DISPOSAL/INJECTION WELL MONITORING REPORT

Name and Address of Existing Permittee
Petroglyph Operating Company, Inc. 2258
P.O. Box 7608
Boise, Idaho 83709

Name and Address of Surface Owner
Ute Indian Tribe
P.O. Box 70
Ft. Duchesne, Utah, 84026

Locate Well and Outline Unit on
Section Plat - 640 Acres



State
Utah

County
Duchesne

Permit Number
UT2736-04434-04535

Surface Location Description

1/4 of 1/4 of SW 1/4 of NW 1/4 of Section 19 Township 5S Range 3W

Locate well in two directions from nearest lines of quarter section and drilling unit

Surface

Location 2005 ft. from (N/S) N Line of quarter section
and 658 ft. from (E/W) W Line of quarter section.

U2 Entered

WELL ACTIVITY

- ☐ Brine Disposal
☒ Enhanced Recovery
☐ Hydrocarbon Storage

TYPE OF PERMIT

- ☐ Individual
☒ Area

Date 3/2/16

Initial B

Number of Wells 111

Lease Name Ute Indian Tribe

Well Number UTE TRIBAL 19-05

INJECTION PRESSURE				TOTAL VOLUME INJECTED		TUBING - CASING ANNULUS PRESSURE (OPTIONAL MONITORING)	
MONTH	YEAR	AVERAGE PSIG	MAXIMUM PSIG	BBL	MCF	MINIMUM PSIG	MAXIMUM PSIG
January	15	1818	1842	643		0	0
February	15	1839	1857	711		0	0
March	15	1847	1863	804		0	0
April	15	1835	1847	726		0	0
May	15	1839	1842	725		0	0
June	15	1836	1855	708		0	0
July	15	1842	1854	752		0	0
August	15	1824	1854	720		0	0
September	15	1803	1860	576		0	0
October	15	1849	1851	790		0	0
November	15	1860	1868	678		0	0
December	15	1839	1870	626		0	0

Certification

I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. (Ref. 40 CFR 144.32)

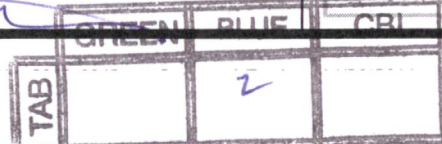
Name and Official Title (Please type or print)

Chad Stevenson, Water Facilities Supervisor

Signature

Date Signed

02/08/2016



Units of Measurement: **Standard**

Water Analysis Report

Production Company: **PETROGLYPH OPERATING CO INC - EBUS**Sales Rep: **James Patry**Well Name: **UTE TRIBAL 19-05 INJ, DUCHESNE**Lab Tech: **Michele Pike**Sample Point: **Well Head**Sample Date: **1/6/2016**Scaling potential predicted using ScaleSoftPitzer from
Brine Chemistry Consortium (Rice University)Sample ID: **WA-327524**

Sample Specifics		Analysis @ Properties in Sample Specifics			
		Cations	mg/L	Anions	mg/L
Test Date:	1/14/2016	Sodium (Na):	2489.88	Chloride (Cl):	3500.00
System Temperature 1 (°F):	60	Potassium (K):	6.02	Sulfate (SO ₄):	520.00
System Pressure 1 (psig):	2000	Magnesium (Mg):	80.08	Bicarbonate (HCO ₃):	927.00
System Temperature 2 (°F):	180	Calcium (Ca):	176.75	Carbonate (CO ₃):	
System Pressure 2 (psig):	50	Strontium (Sr):	5.25	Acetic Acid (CH ₃ COO)	
Calculated Density (g/ml):	1.0027	Barium (Ba):	0.93	Propionic Acid (C ₂ H ₅ COO)	
pH:	7.40	Iron (Fe):	18.89	Butanoic Acid (C ₃ H ₇ COO)	
Calculated TDS (mg/L):	7758.62	Zinc (Zn):	1.59	Isobutyric Acid ((CH ₃) ₂ CHCOO)	
CO ₂ in Gas (%):		Lead (Pb):	0.39	Fluoride (F):	
Dissolved CO ₂ (mg/L):	24.00	Ammonia NH ₃ :		Bromine (Br):	
H ₂ S in Gas (%):		Manganese (Mn):	0.31	Silica (SiO ₂):	31.53
H ₂ S in Water (mg/L):	0.00	Aluminum (Al):	0.14	Calcium Carbonate (CaCO ₃):	
Tot. Suspended Solids (mg/L):		Lithium (Li):	0.85	Phosphates (PO ₄):	4.83
Corrosivity (Langlier Sat. Index):	0.00	Boron (B):	0.02	Oxygen (O ₂):	
Alkalinity:		Silicon (Si):	14.74		

Notes:

(PTB = Pounds per Thousand Barrels)

Temp (°F)	PSI	Calcium Carbonate		Barium Sulfate		Iron Sulfide		Iron Carbonate		Gypsum CaSO ₄ ·2H ₂ O		Celestite SrSO ₄		Halite NaCl		Zinc Sulfide	
		SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
180.00	50.00	1.30	94.96	0.78	0.46	0.00	0.00	2.45	13.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
167.00	267.00	1.15	83.36	0.80	0.47	0.00	0.00	2.27	13.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
153.00	483.00	1.04	75.74	0.83	0.47	0.00	0.00	2.15	13.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
140.00	700.00	0.94	68.26	0.87	0.48	0.00	0.00	2.02	13.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
127.00	917.00	0.85	61.04	0.92	0.49	0.00	0.00	1.89	13.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
113.00	1133.00	0.76	54.18	0.98	0.49	0.00	0.00	1.76	13.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	1350.00	0.68	47.77	1.05	0.50	0.00	0.00	1.64	13.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
87.00	1567.00	0.60	41.87	1.14	0.52	0.00	0.00	1.51	13.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
73.00	1783.00	0.53	36.55	1.25	0.52	0.00	0.00	1.39	12.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
60.00	2000.00	0.47	31.83	1.38	0.53	0.00	0.00	1.28	12.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

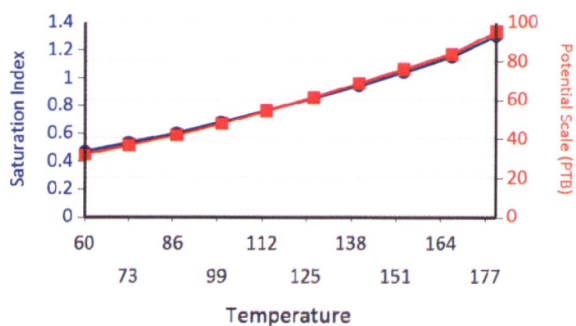
Water Analysis Report

Temp (°F)	PSI	Hemihydrate CaSO ₄ ·0.5H ₂ O		Anhydrate CaSO ₄		Calcium Fluoride		Zinc Carbonate		Lead Sulfide		Mg Silicate		Ca Mg Silicate		Fe Silicate	
		SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
180.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00	1.35	1.02	0.00	0.00	3.41	39.35	1.69	18.83	8.66	14.63
167.00	267.00	0.00	0.00	0.00	0.00	0.00	0.00	1.13	0.99	0.00	0.00	2.31	24.59	1.00	10.60	7.71	14.57
153.00	483.00	0.00	0.00	0.00	0.00	0.00	0.00	0.94	0.94	0.00	0.00	1.50	15.05	0.51	5.25	7.08	14.49
140.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00	0.75	0.87	0.00	0.00	0.70	6.56	0.03	0.40	6.45	14.37
127.00	917.00	0.00	0.00	0.00	0.00	0.00	0.00	0.54	0.76	0.00	0.00	0.00	0.00	0.00	0.00	5.84	14.17
113.00	1133.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33	0.56	0.00	0.00	0.00	0.00	0.00	0.00	5.23	13.88
100.00	1350.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.22	0.00	0.00	0.00	0.00	0.00	0.00	4.65	13.45
87.00	1567.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.07	12.83
73.00	1783.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.51	11.99
60.00	2000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.97	10.91

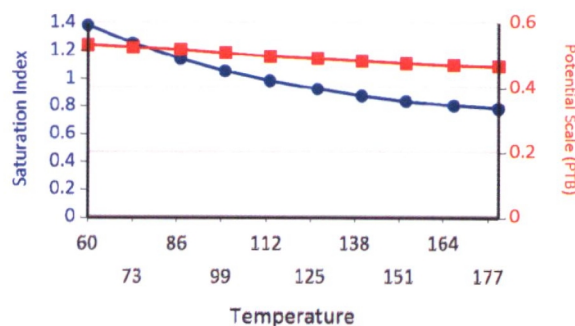
These scales have positive scaling potential under initial temperature and pressure: Calcium Carbonate Barium Sulfate Iron Carbonate Zinc Carbonate Mg Silicate Ca Mg Silicate Fe Silicate

These scales have positive scaling potential under final temperature and pressure: Calcium Carbonate Barium Sulfate Iron Carbonate Fe Silicate

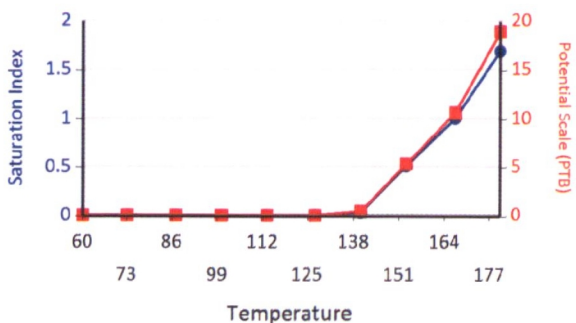
Calcium Carbonate



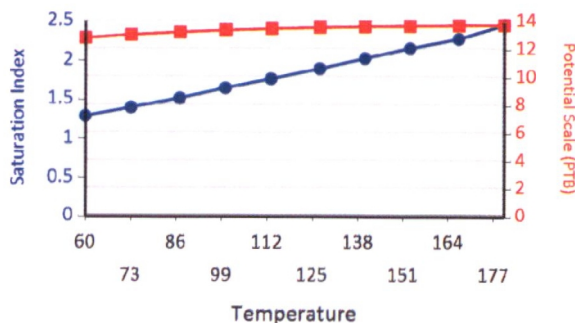
Barium Sulfate



Ca Mg Silicate

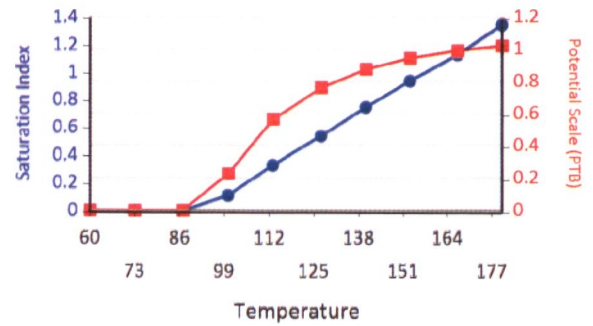


Iron Carbonate

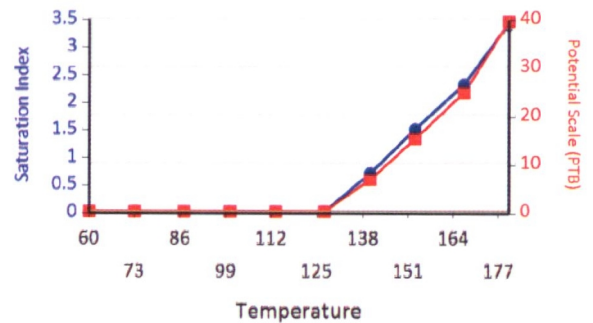


Water Analysis Report

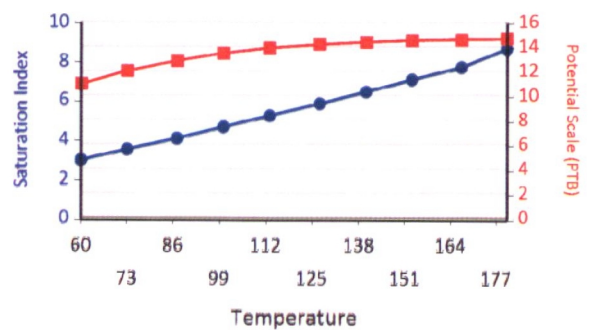
Zinc Carbonate



Mg Silicate



Fe Silicate





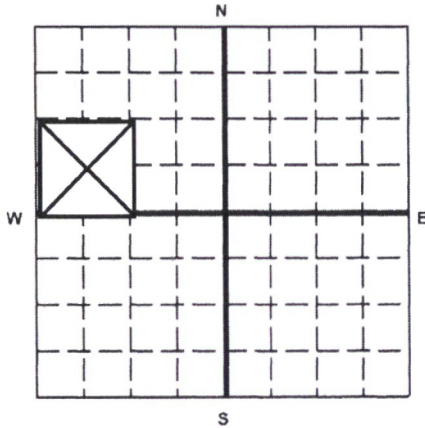
United States Environmental Protection Agency
Washington, DC 20460

ANNUAL DISPOSAL/INJECTION WELL MONITORING REPORT

Name and Address of Existing Permittee
Petroglyph Operating Company, Inc. 2258
P.O. Box 7608
Boise, Idaho 83709

Name and Address of Surface Owner
Ute Indian Tribe
P.O. Box 70
Ft. Duchesne, Utah 84026

Locate Well and Outline Unit on
Section Plat - 640 Acres



State Utah County Duchesne Permit Number UT2736-04535

Surface Location Description

1/4 of 1/4 of SW 1/4 of NW 1/4 of Section 19 Township 5S Range 3W

Locate well in two directions from nearest lines of quarter section and drilling unit

Surface

Location 2005 ft. from (N/S) N Line of quarter section
and 658 ft. from (E/W) W Line of quarter section.

WELL ACTIVITY

- ☐ Brine Disposal
☒ Enhanced Recovery
☐ Hydrocarbon Storage

TYPE OF PERMIT

- ☐ Individual
☒ Area

Number of Wells 111

Lease Name Ute Indian Tribe

Well Number UTE TRIBAL 19-05

INJECTION PRESSURE				TOTAL VOLUME INJECTED		TUBING -- CASING ANNULUS PRESSURE (OPTIONAL MONITORING)	
MONTH	YEAR	AVERAGE PSIG	MAXIMUM PSIG	BBL	MCF	MINIMUM PSIG	MAXIMUM PSIG
January	14	1844	1863	1028		0	0
February	14	1842	1843	842		0	0
March	14	1861	1864	997		0	0
April	14	1860	1868	947		0	0
May	14	1841	1844	872		0	0
June	14	1633	1846	561		0	0
July	14	1827	1856	743		0	0
August	14	1846	1860	957	<u>867</u> <u>inj monthly</u>	0	0
September	14	1838	1862	835		0	0
October	14	1854	1868	841		0	0
November	14	1833	1842	695		0	0
December	14	1843	1857	778		0	0

Certification

I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. (Ref. 40 CFR 144.32)

Name and Official Title (Please type or print)

Chad Stevenson, Water Facilities Supervisor

Signature

Date Signed

2/10/2015

U2 Entered

Date 3/20/15

Initial CSW

	GREEN	BLUE	CBI
TAB		2	

Multi-Chem Analytical Laboratory

1553 East Highway 40

Vernal, UT 84078

Units of Measurement: Standard

multi-chem[®]

A HALLIBURTON SERVICE

Water Analysis Report

Production Company: PETROGLYPH OPERATING CO INC - EBUS

Well Name: UTE TRIBAL 19-05 INJ, DUCHESNE

Sample Point: WELLHEAD

Sample Date: 1/7/2015

Sample ID: WA-297435

Sales Rep: James Patry

Lab Tech: Gary Winegar

Scaling potential predicted using ScaleSoftPitzer from
Brine Chemistry Consortium (Rice University)

Sample Specifics		Analysis @ Properties in Sample Specifics			
Test Date:	1/14/2015	Cations		Anions	
System Temperature 1 (°F):	160	mg/L		mg/L	
System Pressure 1 (psig):	1300	Sodium (Na):	3021.48	Chloride (Cl):	6000.00
System Temperature 2 (°F):	80	Potassium (K):	47.68	Sulfate (SO ₄):	87.00
System Pressure 2 (psig):	15	Magnesium (Mg):	22.26	Bicarbonate (HCO ₃):	976.00
Calculated Density (g/ml):	1.0039	Calcium (Ca):	42.37	Carbonate (CO ₃):	
pH:	8.10	Strontium (Sr):	5.87	Acetic Acid (CH ₃ COO)	
Calculated TDS (mg/L):	10244.57	Barium (Ba):	12.96	Propionic Acid (C ₂ H ₅ COO)	
CO ₂ in Gas (%):		Iron (Fe):	1.81	Butanoic Acid (C ₃ H ₇ COO)	
Dissolved CO ₂ (mg/L):	0.00	Zinc (Zn):	0.18	Isobutyric Acid ((CH ₃) ₂ CHCOO)	
H ₂ S in Gas (%):		Lead (Pb):	0.03	Fluoride (F):	
H ₂ S in Water (mg/L):	5.00	Ammonia NH ₃ :		Bromine (Br):	
		Manganese (Mn):	0.12	Silica (SiO ₂):	26.81

Notes:

B=6.22 Al=.05 Li

(PTB = Pounds per Thousand Barrels)

		Calcium Carbonate		Barium Sulfate		Iron Sulfide		Iron Carbonate		Gypsum CaSO ₄ ·2H ₂ O		Celestite SrSO ₄		Halite NaCl		Zinc Sulfide	
Temp (°F)	PSI	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
80.00	14.00	0.92	22.33	1.72	7.56	2.82	1.00	1.36	1.25	0.00	0.00	0.00	0.00	0.00	0.00	9.99	0.09
88.00	157.00	0.90	21.30	1.64	7.52	2.72	1.00	1.37	1.26	0.00	0.00	0.00	0.00	0.00	0.00	9.79	0.09
97.00	300.00	0.92	21.90	1.56	7.48	2.66	1.00	1.42	1.26	0.00	0.00	0.00	0.00	0.00	0.00	9.62	0.09
106.00	443.00	0.94	22.54	1.49	7.44	2.62	1.00	1.47	1.27	0.00	0.00	0.00	0.00	0.00	0.00	9.48	0.09
115.00	585.00	0.96	23.22	1.42	7.40	2.58	1.00	1.52	1.27	0.00	0.00	0.00	0.00	0.00	0.00	9.33	0.09
124.00	728.00	0.99	23.94	1.37	7.35	2.54	1.00	1.56	1.28	0.00	0.00	0.00	0.00	0.00	0.00	9.20	0.09
133.00	871.00	1.01	24.68	1.31	7.30	2.52	1.00	1.61	1.28	0.00	0.00	0.00	0.00	0.00	0.00	9.08	0.09
142.00	1014.00	1.04	25.44	1.27	7.26	2.50	1.00	1.65	1.29	0.00	0.00	0.00	0.00	0.00	0.00	8.97	0.09
151.00	1157.00	1.07	26.21	1.22	7.21	2.49	1.00	1.70	1.29	0.00	0.00	0.00	0.00	0.00	0.00	8.86	0.09
160.00	1300.00	1.10	26.99	1.18	7.16	2.48	1.00	1.74	1.29	0.00	0.00	0.00	0.00	0.00	0.00	8.76	0.09

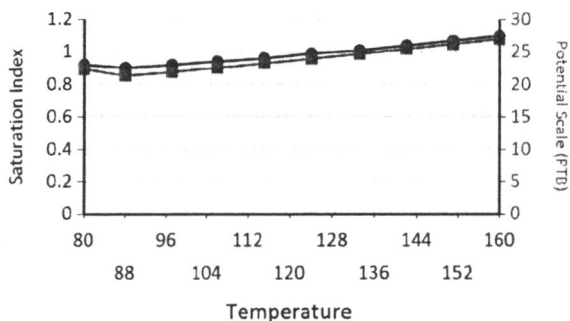
		Hemihydrate CaSO ₄ ·0.5H ₂ O		Anhydrate CaSO ₄		Calcium Fluoride		Zinc Carbonate		Lead Sulfide		Mg Silicate		Ca Mg Silicate		Fe Silicate	
Temp (°F)	PSI	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
80.00	14.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.49	0.01	0.00	0.00	0.00	0.00	5.10	1.37
88.00	157.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.17	0.01	0.03	0.21	0.00	0.00	5.11	1.37
97.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.90	0.01	0.42	1.69	0.00	0.00	5.34	1.38
106.00	443.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	10.65	0.01	0.82	3.22	0.00	0.00	5.58	1.38
115.00	585.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	10.41	0.01	1.22	4.83	0.19	0.96	5.83	1.39
124.00	728.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24	10.19	0.01	1.63	6.54	0.41	1.96	6.09	1.39
133.00	871.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35	9.98	0.01	2.04	8.34	0.64	3.00	6.36	1.40
142.00	1014.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.45	9.78	0.01	2.45	10.24	0.87	4.08	6.63	1.40
151.00	1157.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.54	9.60	0.01	2.86	12.24	1.11	5.20	6.91	1.40
160.00	1300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.64	9.42	0.01	3.27	14.32	1.34	6.35	7.20	1.40

Water Analysis Report

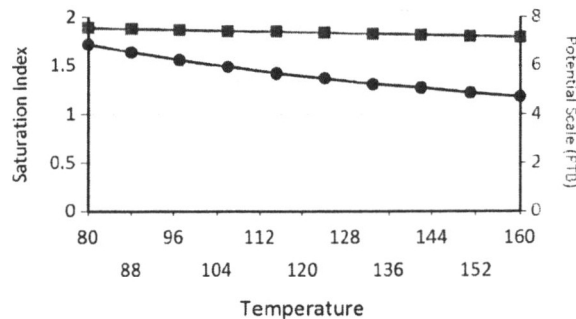
These scales have positive scaling potential under initial temperature and pressure: Calcium Carbonate Barium Sulfate Iron Sulfide Iron Carbonate Zinc Sulfide Lead Sulfide Fe Silicate

These scales have positive scaling potential under final temperature and pressure: Calcium Carbonate Barium Sulfate Iron Sulfide Iron Carbonate Zinc Sulfide Zinc Carbonate Lead Sulfide Mg Silicate Ca Mg Silicate Fe Silicate

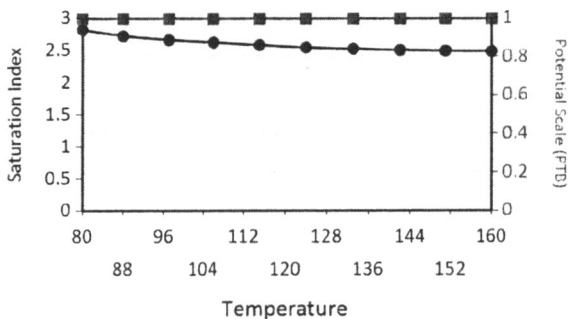
Calcium Carbonate



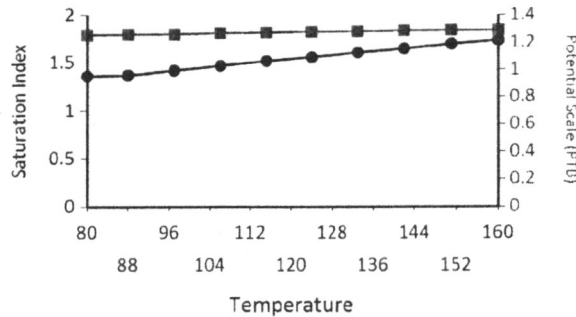
Barium Sulfate



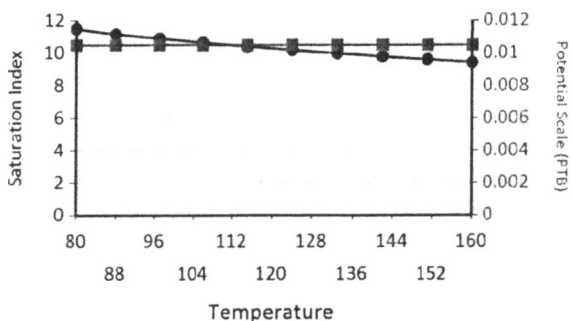
Iron Sulfide



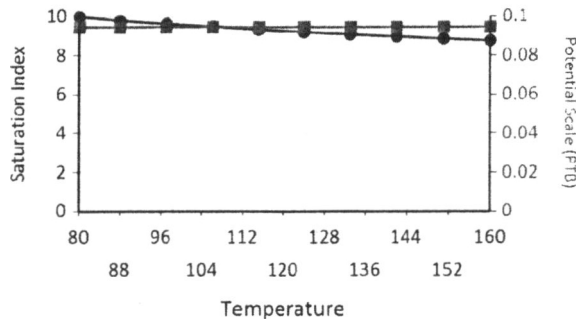
Iron Carbonate



Lead Sulfide

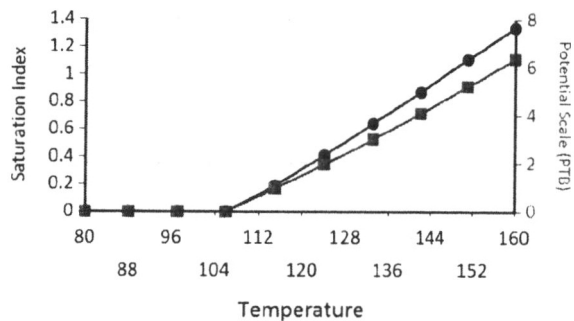


Zinc Sulfide

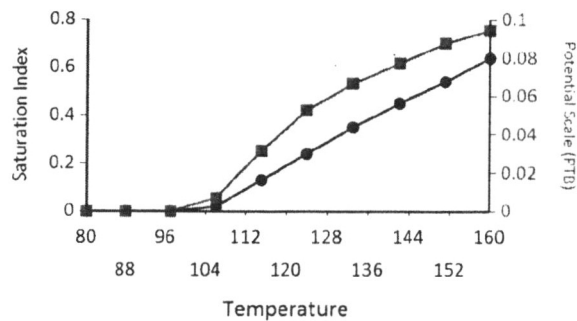


Water Analysis Report

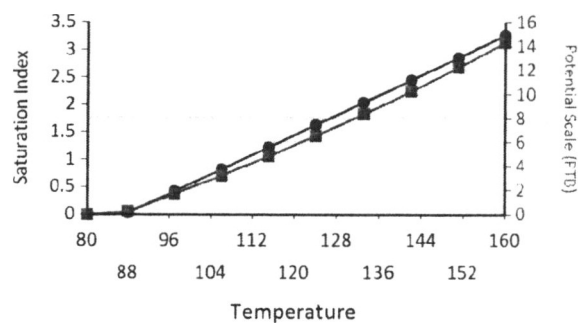
Ca Mg Silicate



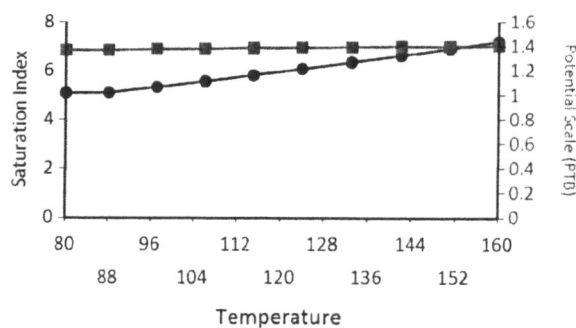
Zinc Carbonate



Mg Silicate



Fe Silicate



September 28, 2015

Gary Wang
Mail Code: 8ENF-UFO
US EPA Region 8
1595 Wyncoop Street
Denver, CO 80202-1129

RE: EPA AREA PERMIT NO. UT2736-04535
Mechanical Integrity Test
Standard Five year retesting for Ute Tribal 19-05

Mr. Breffle:

The enclose Mechanical Integrity Test was performed on the above referenced well on September 19, 2015. This MIT was performed because the well was due for the regular five year Mechanical Integrity Test.

If you need any more information please call at (435) 722-5302.

Sincerely,
Petroglyph Operating Co., Inc.



Rodrigo Jurado
Regulatory Compliance Specialist

Encl: MIT for the Ute Tribal 19-05

U2 Entered
Date 10/14/15
Initial JB

	GREEN	BLUE	CB1
TAB		2	

Mechanical Integrity Test Tubing/Casing Annulus Pressure Test

U.S. Environmental Protection Agency
Underground Injection Control Program
1595 Wynkoop Street, Denver, CO 80202

EPA Witness: _____ Date: 9/19/15
Test conducted by: CHAD STEVENSON
Others present: _____

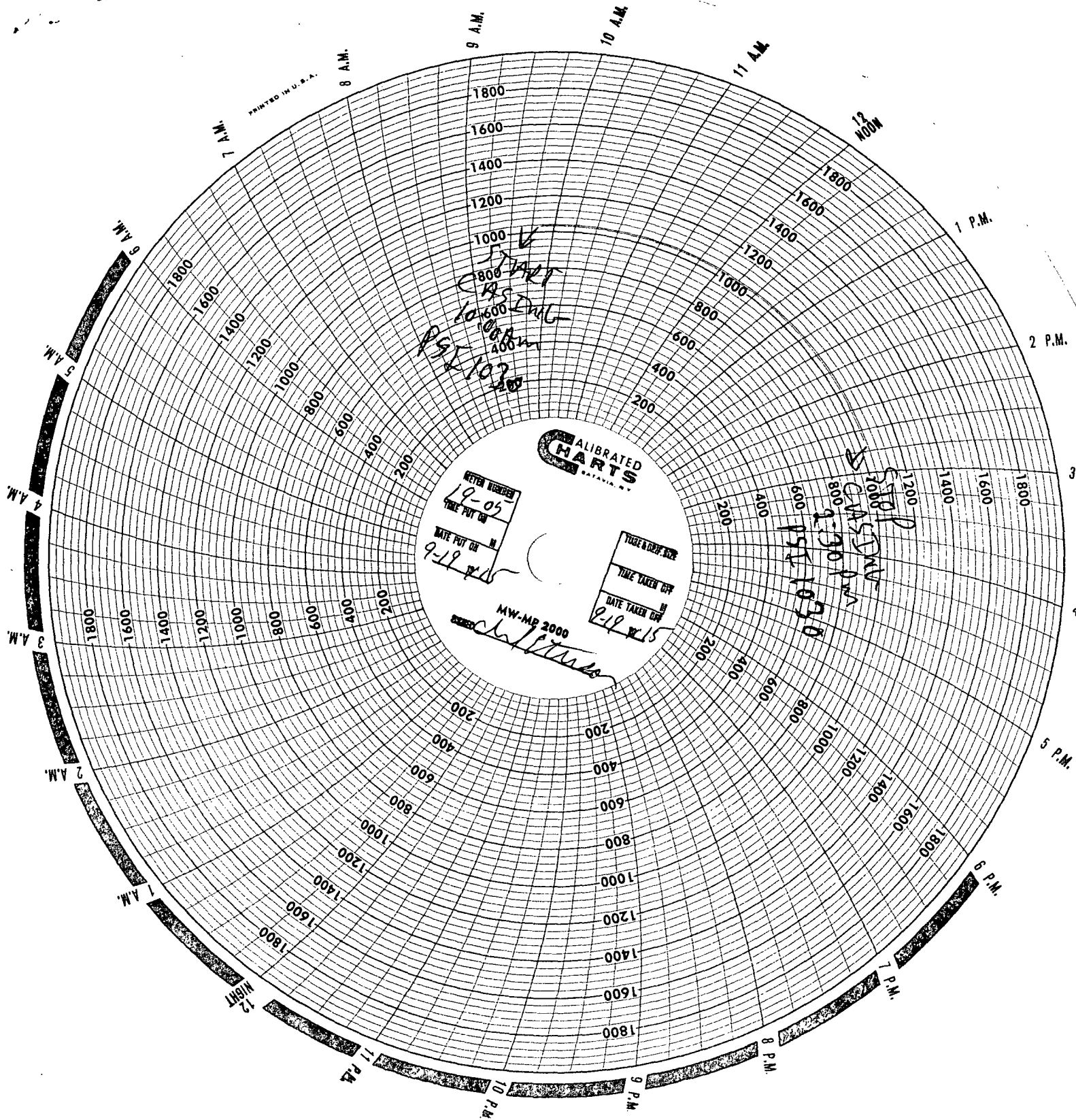
Well Name: <u>19-05</u>	Type: ER SWD	Status: AC TA UC
Field: <u>ANTELOPE CREEK</u>		
Location: <u>19-05</u> Sec: _____ T _____ N/S R _____ E/W County: <u>DUCHESNE</u> State: <u>UT</u>		
Operator: <u>PETROGLYPH ENERGY</u>		
Last MIT: <u>1</u> Maximum Allowable Pressure: _____ PSIG		

Regularly scheduled test? ☒ Yes [] No
Initial test for permit? [] Yes [] No
Test after well rework? [] Yes [] No

Well injecting during test? If Yes, rate: 17 bpd
Pre-test annulus pressure: _____ psig

MIT DATA TABLE	Test #1	Test #2	Test #3
TUBING	PRESSURE RECORD		
Initial Pressure	1776 psig	psig	psig
End of test pressure	1776 psig	psig	psig
CASING / TUBING ANNULUS	PRESSURE RECORD		
0 minutes	1030 psig	psig	psig
5 minutes	1030 psig	psig	psig
10 minutes	1030 psig	psig	psig
15 minutes	1030 psig	psig	psig
20 minutes	1030 psig	psig	psig
25 minutes	1030 psig	psig	psig
30 minutes	1030 psig	psig	psig
Hours: <u>4</u> minutes	1030 psig	psig	psig
_____ minutes	psig	psig	psig
RESULT	[] Pass [] Fail	[] Pass [] Fail	[] Pass [] Fail

Does the annulus pressure build back up after the test? If Yes, _____ psig.





United States Environmental Protection Agency
Washington, DC 20460

ANNUAL DISPOSAL/INJECTION WELL MONITORING REPORT

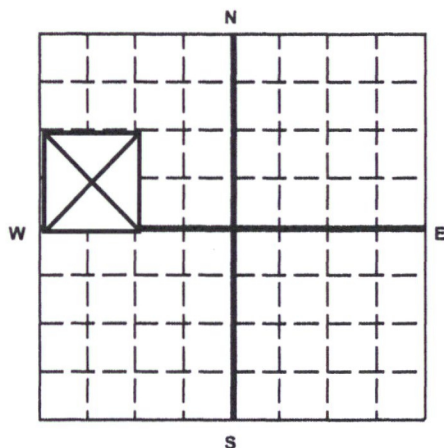
Name and Address of Existing Permittee

Petroglyph Operating Company, Inc. 2258
P.O. Box 7608
Boise, Idaho 83709

Name and Address of Surface Owner

Ute Indian Tribe
P.O. Box 70
Ft. Duchesne, Utah 84026

Locate Well and Outline Unit on
Section Plat - 640 Acres



State
Utah

County
Duchesne

Permit Number
UT2736-04535

Surface Location Description

1/4 of 1/4 of SW 1/4 of NW 1/4 of Section 19 Township 5S Range 3W

Locate well in two directions from nearest lines of quarter section and drilling unit

Surface

Location 2005 ft. from (N/S) N Line of quarter section
and 658 ft. from (E/W) W Line of quarter section.

WELL ACTIVITY

- ☐ Brine Disposal
☒ Enhanced Recovery
☐ Hydrocarbon Storage

TYPE OF PERMIT

- ☐ Individual
☒ Area

Number of Wells 111

Lease Name Ute Indian Tribe

Well Number UTE TRIBAL 19-05

INJECTION PRESSURE

TOTAL VOLUME INJECTED

TUBING - CASING ANNULUS PRESSURE (OPTIONAL MONITORING)

MONTH	YEAR	AVERAGE PSIG	MAXIMUM PSIG	BBL	MCF	MINIMUM PSIG	MAXIMUM PSIG
January	13	1819	1857	605		0	0
February	13	1823	1868	644		0	0
March	13	1840	1862	594		0	0
April	13	1854	1864	681		0	0
May	13	1800	1873	705		0	0
June	13	1129	1821	639		0	0
July	13	1669	1870	1438		0	0
August	13	1815	1825	1506		0	110
September	13	1839	1869	1302		0	0
October	13	1826	1841	1039		0	0
November	13	1848	1856	1078		0	0
December	13	1841	1847	979		0	0

Certification

I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. (Ref. 40 CFR 144.32)

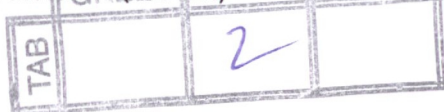
Name and Official Title (Please type or print)

Chad Stevenson, Water Facilities Supervisor

Signature

Date Signed

2/11/2014



U2 Entered

Date

3/24/14

Initial

JS

Multi-Chem Analytical Laboratory

1553 East Highway 40

Vernal, UT 84078

Units of Measurement: Standard

multi-chem®

A HALLIBURTON SERVICE

Water Analysis Report

Production Company: PETROGLYPH ENERGY INC

Well Name: UTE TRIBAL 19-05 INJ

Sample Point: Wellhead

Sample Date: 1/8/2014

Sample ID: WA-263371

Sales Rep: James Patry

Lab Tech: Gary Winegar

Scaling potential predicted using ScaleSoftPitzer from
Brine Chemistry Consortium (Rice University)

Sample Specifics		Analysis @ Properties in Sample Specifics			
Test Date:	1/15/2014	Cations	mg/L	Anions	mg/L
System Temperature 1 (°F):	180	Sodium (Na):	1293.00	Chloride (Cl):	4000.00
System Pressure 1 (psig):	1300	Potassium (K):	65.00	Sulfate (SO4):	209.00
System Temperature 2 (°F):	60	Magnesium (Mg):	49.00	Bicarbonate (HCO3):	976.00
System Pressure 2 (psig):	15	Calcium (Ca):	109.00	Carbonate (CO3):	
Calculated Density (g/ml):	1.001	Strontium (Sr):	4.70	Acetic Acid (CH3COO)	
pH:	8.00	Barium (Ba):	2.70	Propionic Acid (C2H5COO)	
Calculated TDS (mg/L):	6758.91	Iron (Fe):	29.00	Butanoic Acid (C3H7COO)	
CO2 in Gas (%):		Zinc (Zn):	0.02	Isobutyric Acid ((CH3)2CHCOO)	
Dissolved CO2 (mg/L):	0.00	Lead (Pb):	0.00	Fluoride (F):	
H2S in Gas (%):		Ammonia NH3:		Bromine (Br):	
H2S in Water (mg/L):	0.00	Manganese (Mn):	0.09	Silica (SiO2):	21.40

Notes:

B=2.8 AI=.01

(PTB = Pounds per Thousand Barrels)

		Calcium Carbonate		Barium Sulfate		Iron Sulfide		Iron Carbonate		Gypsum CaSO4·2H2O		Celestite SrSO4		Halite NaCl		Zinc Sulfide	
Temp (°F)	PSI	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
60.00	14.00	1.25	51.60	1.77	1.58	0.00	0.00	2.42	20.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
73.00	157.00	1.24	50.52	1.62	1.57	0.00	0.00	2.47	20.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
86.00	300.00	1.28	52.83	1.49	1.56	0.00	0.00	2.55	20.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	443.00	1.32	55.41	1.38	1.54	0.00	0.00	2.64	20.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
113.00	585.00	1.36	58.23	1.28	1.52	0.00	0.00	2.73	20.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
126.00	728.00	1.41	61.23	1.20	1.51	0.00	0.00	2.81	21.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
140.00	871.00	1.47	64.34	1.13	1.49	0.00	0.00	2.89	21.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
153.00	1014.00	1.53	67.51	1.07	1.47	0.00	0.00	2.98	21.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
166.00	1157.00	1.59	70.68	1.02	1.45	0.00	0.00	3.06	21.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
180.00	1300.00	1.66	73.78	0.98	1.44	0.00	0.00	3.14	21.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

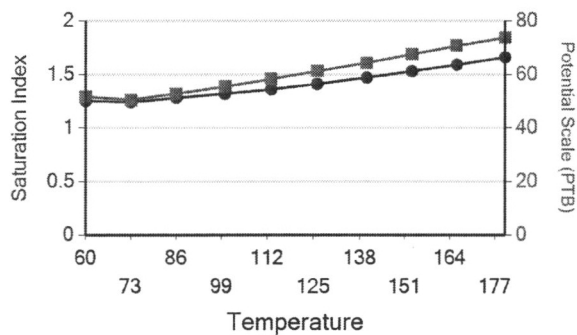
Water Analysis Report

Temp (°F)	PSI	Hemihydrate CaSO ₄ •0.5H ₂ O		Anhydrate CaSO ₄		Calcium Fluoride		Zinc Carbonate		Lead Sulfide		Mg Silicate		Ca Mg Silicate		Fe Silicate	
		SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
60.00	14.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.47	19.24
73.00	157.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.59	19.28
86.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.95	0.00	0.00	7.97	19.86
100.00	443.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87	3.57	0.04	0.24	8.38	20.38
113.00	585.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.54	6.50	0.41	1.80	8.81	20.85
126.00	728.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.21	9.74	0.79	3.46	9.27	21.25
140.00	871.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.89	13.20	1.17	5.19	9.74	21.58
153.00	1014.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.57	16.70	1.57	6.91	10.22	21.84
166.00	1157.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.25	19.92	1.96	8.53	10.71	22.05
180.00	1300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.92	22.50	2.36	9.95	11.21	22.20

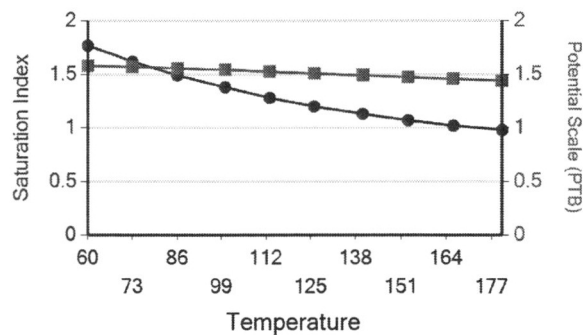
These scales have positive scaling potential under initial temperature and pressure: Calcium Carbonate Barium Sulfate Iron Carbonate Fe Silicate

These scales have positive scaling potential under final temperature and pressure: Calcium Carbonate Barium Sulfate Iron Carbonate Mg Silicate Ca Mg Silicate Fe Silicate

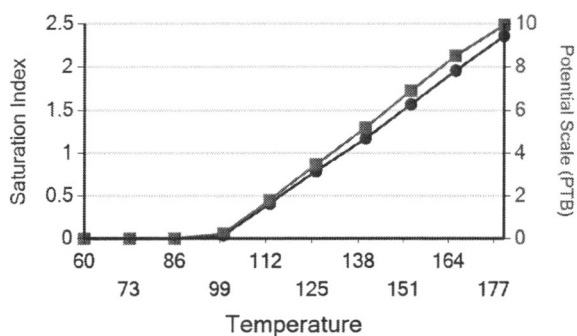
Calcium Carbonate



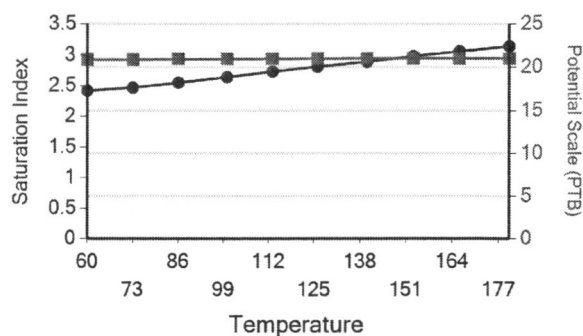
Barium Sulfate



Ca Mg Silicate

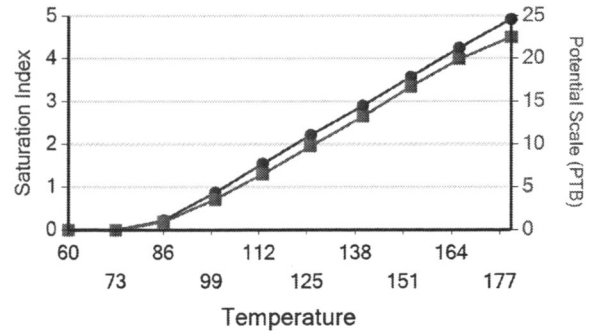


Iron Carbonate

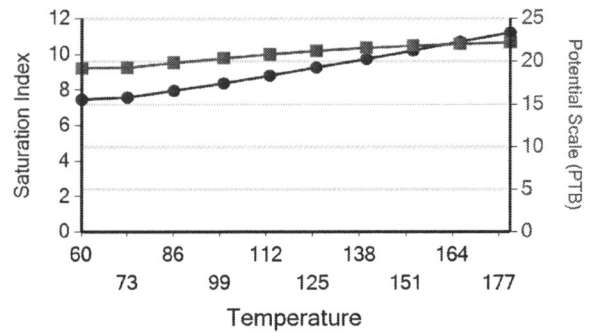


Water Analysis Report

Mg Silicate



Fe Silicate



Petroglyph Operating Company, Inc.
Annulus Pressure Cause and Mitigation Measures
2013 EPA Annual Injection Report

Well Name: Ute Tribal 19-05

UIC Permit Number: UT2736-04535

API Number: 43-013-31793

Cause of Pressure and Mitigation Measures:

This well sometimes builds up a small amount of pressure due to formation temperature. The pressure is relieved and does not return for some time.





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VIII

999 18th STREET - SUITE 500
DENVER, COLORADO 80202-2466

FINAL MAJOR AREA PERMIT MODIFICATIONS

EPA Area Permit No. UT2736-00000

Petroglyph Operating Company, Inc.

Antelope Creek Waterflood
Antelope Creek Field
Duchesne County, Utah

Pursuant to Part III, Section B. 1. of the above-referenced Underground Injection Control (UIC) permit, modifications to subject Area Permit are hereby being established. The purpose of these modifications, of the Permit PARTS I and II, is to **expand the Antelope Creek Waterflood Area to the West and North and, at the same time, change title and add a word.** Incidental permit modifications of PART III are being made for the purpose of **correcting nomenclature errors.**

Modifications of the original versions of **PART I**, of **Part II**, Sections A.1.(a); B; C.1; and E.2., and **correction of nomenclature in Part III** are as follows:

MODIFICATION #1 [PART I] - (Original Permit version):

PART I. AUTHORIZATION TO CONVERT/OR CONSTRUCT AND INJECT

"Injection activities shall not commence until the operator has fulfilled all applicable conditions of this permit and has received written authorization from the Director."

Is Modified to read:

PART I. AUTHORIZATION TO CONVERT/OR CONSTRUCT AND OPERATE

MODIFICATION #2 [PART I] - (Original Permit version):

"Pursuant to ... is hereby authorized, under this area permit, to convert four (4) existing oil production wells to Class II enhanced recovery injection wells located within the proposed Antelope Creek Field, Duchesne County, Utah. Each of these proposed wells are located within the permitted area which is defined as follows:"

Township 5 South, Range 3 West, Duchesne County, Utah
Sections 2, 3, 4, 5, 6 (SE/4 of SE/4), 7, 8, 9, 10, 15, 16,
17, 18, 19, 20, 21, 28, 30, 31, 32, and 33.



Printed on Recycled Paper

Is Modified to read:

"Pursuant to ... is hereby authorized, under this expanded area permit (as modified), to initially convert four (4) additional existing oil production wells to Class II enhanced recovery injection wells located within the Antelope Creek Field, Duchesne County, Utah. Each of these proposed wells are located within the new expansion of the now permitted area which is defined as follows:"

Township 4 South, Range 3 West, Duchesne County, Utah

Section 20: NE/NE, SE/NE, NE/SE,
Section 21: All Section 22: All, Section 25: E/2, NW,
S/2SW, NWSW, Section 26: All, Section 27: All,
Section 28: All, Section 29: SENE, E/2SE, SWSE, SESW,
Section 31: W/2, NWNE, S/2SE, NESE, Section 32: E/2, SW,
S/2NW, NENW, Section 33: All, Section 34: All,
Section 35: All, Section 36: All

Township 4 South, Range 4 West, Duchesne County, Utah

Section 25: S/2,

Township 5 South, Range 3 West, Duchesne County, Utah

Sections 2, 3, 4, 5, Section 6: SE/4SE/4, Sections: 7, 8, 9,
10, 15, 16, 17, 18, 19, 20, 21, 28, 29, 30, 31, 32, and 33:
All,

Township 5 South, Range 4 West, Duchesne County, Utah

Section 1: All, Section 12: All, Section 36: All.

MODIFICATION #3 [PART I] - (Original Permit version):

"Injection will be for the purpose of enhanced recovery ... and initially utilizing the following currently existing production wells located in T5S-R3W:"

<u>WELL NAME</u>	<u>LOCATION</u>	<u>EPA PERMIT NO.</u>
Ute Tribal #1-8	NW/4 of NW/4 Section 8	UT2736-04201
Ute Tribal #5-8	SE/4 of NW/4 Section 8	UT2736-04203
Ute Tribal #4-18	NW/4 of NE/4 Section 18	UT2736-04202
Ute Tribal #5-18	NE/4 of SE/4 Section 18	UT2736-04204

"Injection activities shall not commence until the operator has fulfilled all applicable conditions of this permit and has received written authorization from the Director."

Is Modified to read:

"Injection will be for the purpose of enhanced oil recovery ... and initially utilizing the following currently existing production wells located in T5S-R3W:"

<u>WELL NAME</u>	<u>LOCATION</u>	<u>EPA PERMIT NO.</u>
Ute Tribal #1-8	NW/4 of NW/4 Section 8	UT2736-04201
Ute Tribal #5-8	SE/4 of NW/4 Section 8	UT2736-04203
Ute Tribal #4-18	NW/4 of NE/4 Section 18	UT2736-04202
Ute Tribal #5-18	NE/4 of SE/4 Section 18	UT2736-04204

and the four (4) additional production wells located within the expanded and newly defined permitted Area:"

<u>WELL NAME</u>	<u>LOCATION</u>	<u>EPA PERMIT NO.</u>
Ute Tribal #33-14D3	SE/SW Section 33	UT2736-04420
Ute Tribal #33-10D3	NW/SE Section 33	UT2736-04421
Ute Tribal #33-08D3	SE/NE Section 33	UT2736-04422
Ute Tribal #33-16D3	SE/SE Section 33	UT2736-04423

"Injection activities shall not commence until the operator has fulfilled all applicable conditions of this permit and has received separate written authorization from the Director."

Additional wells may be added as long as the permittee meets the provisions of the Area permit and according to the terms under CFR 40 § 144.33 (c).

MODIFICATION #4 [PART II. B.] - (Original Permit version):

"The operator is not required to take any corrective action on any of the forty-nine (49) production well or the five (5) plugged and abandoned wells within the area of review (AOR), before the effective date of the permit. The manner in which the wells are cased and cemented will prevent any migration of fluids from the injection zones into underground sources of drinking water (USDWs) in the Uinta Formation."

Is Modified to read:

"The operator is not required to take any corrective action on any of the original forty-nine (49) production wells or the five (5) plugged and abandoned (P&A'd) wells found within the AOR of the initial area permit.

"The operator is not required to take corrective action on any of the thirty (30) wells within the expanded 1/4-mile Area of Review (AOR) before the effective date of this Modified Area Permit; of the thirty (30) wells, three (3) are T/A'd, nine (9) are P/A'd, fourteen (14) are producing oil wells, one (1) shut-in oil well, one (1) EPA permitted Class II water injection well, one (1) waiting on completion, and one (1) WDC well. These wells have been reviewed and were determined to have been satisfactorily constructed or plugged and abandoned to prevent any migration of fluids from the injection zones into underground sources of drinking water (USDWs) in the Uinta Formation."

MODIFICATION #5 [PART II. C.1.] - (Original Permit version):

"C. WELL OPERATION

1. Prior to Commencing Injection (Initial Wells).
Individual enhanced recovery operations for the four (4) existing production wells (Ute Tribal #1-8, #5-8, #4-18 and #5-18) may not commence until the permittee has compiled with both (a) and (b), as follows:"

Is Modified to read:

"C. WELL OPERATION

1. Prior to Commencing Injection (Initial Wells).
Individual enhanced recovery operations for the four (4) existing production wells, (Ute Tribal #1-8, #5-8, #4-18, and #5-18), and the four (4) additional production wells within the expanded and newly defined permitted Area, (Ute Tribal #33-14D3, #33-10D3, #33-08D3 and #33-16D3) may not commence until the permittee has compiled with both (a) and (b), as follows:"

MODIFICATION #6 [PART II. D.] - (Original Permit version):

- "1. Injection well Monitoring Program. Samples and measurements shall be representative ...
 - (a) Analysis of the disposed fluids ..."
 - (ii) whenever there is a change in the source of disposed fluids ... "

Is Modified to read:

- "1. Injection well Monitoring Program. Samples and measurements shall be representative ...
- (a) Analysis of the **enhanced recovery injection** fluids ..."
- (ii) whenever there is a change in the source of **enhanced recovery injection** fluids ..."

MODIFICATION #7 [PART III. A. & B.] - (Original Permit version):

"A. EFFECT OF PERMIT

The permittee is allowed to engage in underground disposal in accordance with the conditions of this permit. The permittee, as authorized by this permit, shall not construct, operate, maintain, convert, plug, abandon, or conduct any other disposal activity ... Any underground disposal activity not authorized ... "

"B. PERMIT ACTIONS

2. Conversions. The Director may, for cause or upon a request from the permittee, allow conversion of the well from a Class II salt water disposal well to a non-Class II well. Requests to convert the disposal well from its Class II status to a non-Class II well, such as a production well must be made in writing to the Director. ... "

Is Modified to read:

"A. EFFECT OF PERMIT

The permittee is allowed to engage in underground **enhanced recovery injection** in accordance with the conditions of this permit. The permittee, as authorized by this permit, shall not construct, operate, maintain, convert, plug, abandon, or conduct any other **injection** activity ... Any underground **injection** activity not authorized ... "

"B. PERMIT ACTIONS

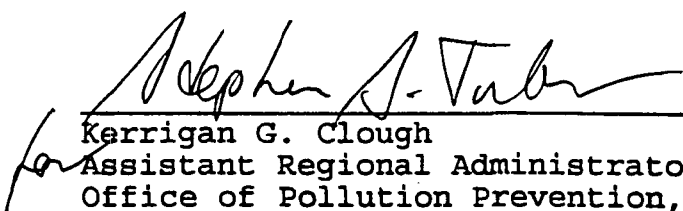
2. Conversions. The Director may, for cause or upon a request from the permittee, allow conversion of the well from a Class II **enhanced recovery injection** well to a non-Class II well. Requests to convert

the injection well from its Class II status to a non-Class II well, such as a production well must be made in writing to the Director. ... "

All other provisions and conditions of the permit remain as originally issued.

4-30-98

Date


Kerrigan G. Clough
Assistant Regional Administrator
Office of Pollution Prevention,
State and Tribal Assistance

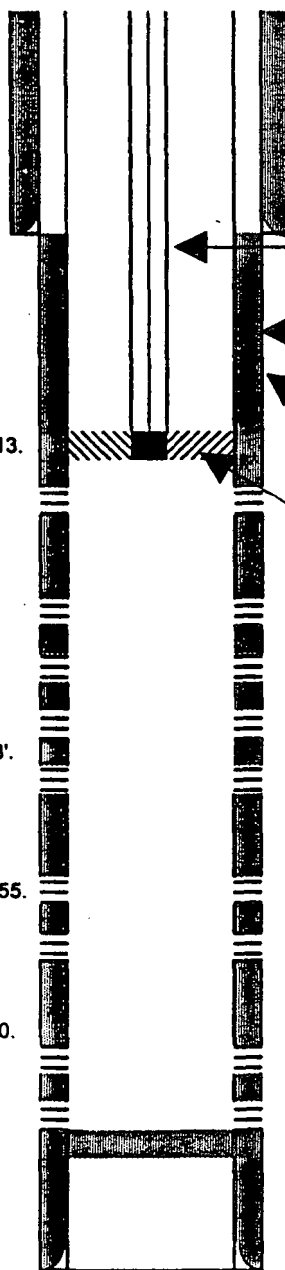
APPENDIX A

I. WELL CONSTRUCTION SCHEMATICS

**Ute Tribal #33-08D3-Wellbore Diagram
After Conversion**

Well History:

- 11/23/97 Spud Well
12/27/97 First Production
- 12/11/97 H02 Perfs, 6428 to 6432', 4 spf.
Broke down with acid and treated water.
Fraced with 300 bbls. x-linked gel water and
28,300 lbs. total sand. ISIP 2684 psi.
- 12/11/97 E01 Perfs, 5826 to 5832', 4 spf.
Broke down with acid and treated water.
Fraced with 318 bbls. x-linked gel water and
42,200 lbs. total sand. ISIP 2200 psi.
- 12/12/97 D7.2 Perfs, 5582 to 5610', 4 spf.
Broke down with acid and treated water.
Fraced with 810 bbl. x-linked gel water and
170,700 lbs. total sand. ISIP 2817 psi, 5 min. 2813.
- 12/15/97 D3.4 Perfs, 5324 to 5354', 4 spf. also,
D3.3 Perfs, 5311 to 5314', 4 spf.
Broke down with acid and treated water.
Fraced with 771 bbls. x-linked gel water and
151,800 lbs. total sand. ISIP 2113 psi.
- 12/15/97 C6.1 Perfs, 501 to 5006', 4 spf.
Broke down with acid and treated water.
Fraced with 323 bbls. x-linked gel water and
50,800 lbs. total sand. ISIP 1983' psi, 5 min 1888'.
- 12/18/97 C5.2 Perfs, 4902 to 4906', 4 spf.
Broke down with acid and treated water.
Fraced with 245 bbls. x-linked gel water and
310,000 lbs. total sand. ISIP 2450' psi, 5 min. 1955.
- 12/18/97 B10 Perfs, 4559 to 4563', 4 spf.
Broke down with acid and treated water.
Fraced with 297 bbls. x-linked gel water and
43,000 lbs. total sand. ISIP 2659' psi, 5 min. 2560.
- B8 Perfs, 4486 to 4496', 4 spf.
Broke down with acid and treated water.
Fraced with 3000 gal. x-linked gel water and
13,000 lbs. total sand.
- 12/18/97 B6.3 Perfs, 4441 to 4445', 4 spf.
Broke down with acid and treated water.
Fraced with 244 bbls. x-linked gel water and
27,000 lbs. total sand. ISIP 3418' psi, 5 min. 3100.
- 12/18/97 B6.2 Perfs, 4343 to 4347', 4 spf.
Broke down with acid and treated water.
Fraced with 217 bbls. x-linked gel water and
27,600 lbs. total sand. ISIP 2100' psi, 5 min. 1980.



GL: 5787
KB: 5797

8 5/8" 24# J55 Surface csg
@ 505' KB with 280 sxs.

Surface hole size : 12 1/4"

Tubing @ 139 Jts. of 2 7/8"
6.5# J-55 @ 4310' KB

Hole size: 7 7/8" bit

Cement top @ 505' KB
5 1/2" 15.5 J55 csg @ 6531'
KB cm'd with 630 sxs

Casing Packer @ 4310' KB

Perfs:

H02	6428 to 6432'
E01	5826 to 5832'
D7.2	5582 to 5610'
D3.4	5324 to 5354'
D3.3	5311 to 5314'
C6.1	5001 to 5006'
C5.2	4902 to 4906'
B10	4559 to 4563'
B8	4486 to 4496'
B6.3	4441 to 4445'
B6.2	4343 to 4347'

PBTD: 6470' KB
TD: 6570' KB

(Not to Scale)

Petroglyph Operating Co., Inc.

Ute Tribal #33-08D3
(1848' FNL & 762' FEL)
SE NE Section 33 - 4S - 3W
Antelope Creek Field
Duchesne Co. Utah

API #43-013-31956 ; LEASE #14-20-H62-4736

**Ute Tribal #33-10D3-Wellbore Diagram
After Conversion**

Well History:

10/31/97 Spud Well
12/16/97 First Production

12/5/97 H02 Perfs, 6400 to 6403', 4 spf.
H01 Perfs, 6372 to 6378', 4 spf.
Broke down with acid and treated water.
Fraced with 9,400 gal. x-linked gel water and 50,900 lbs. total sand.
ISIP 3278 psi. 15 min 2226 psi.

**THE FOLLOWING ZONES WILL
BE COMPLETED AT A LATER DATE**

D7.21 Perfs, 5604 to 5611', 4 spf.
Broke down with acid and treated water.
Fraced with 420 bbl. x-linked gel water and 68,000 lbs. total sand.

D7.2 Perfs, 5538 to 5550', 4 spf.
Broke down with acid and treated water.
Fraced with 560 bbl. x-linked gel water and 102,000 lbs. total sand.

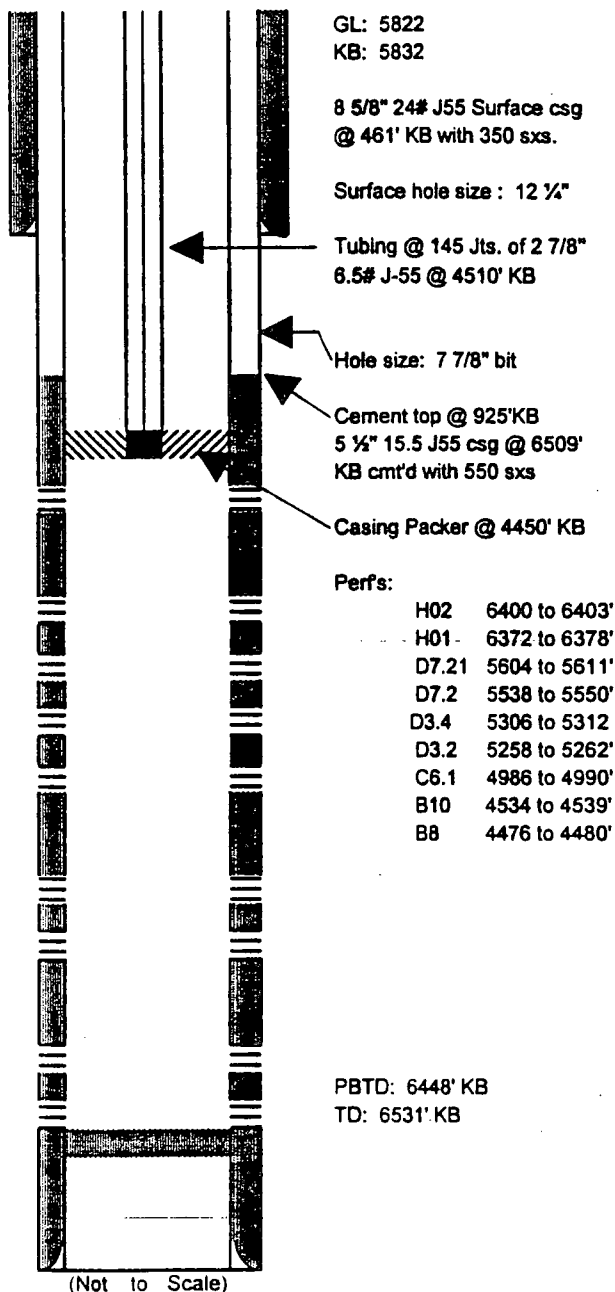
D3.4 Perfs, 5306 to 5312', 4 spf.
Broke down with acid and treated water.
Fraced with 280 bbl. x-linked gel water and 56,000 lbs. total sand.

D3.2 Perfs, 5258 to 5262', 4 spf.
Broke down with acid and treated water.
Fraced with 191 bbl. x-linked gel water and 28,000 lbs. total sand.

C6.1 Perfs, 4986 to 4990
Broke down with acid and treated water.
Fraced with 191 bbl. x-linked gel water and 28,000 lbs. total sand.

B10 Perfs, 4534 to 4539', 4 spf.
Broke down with acid and treated water.
Fraced with 191 bbl. x-linked gel water and 28,000 lbs. total sand.

B8 Perfs, 4476 to 4480', 4 spf.
Broke down with acid and treated water.
Fraced with 130 bbl. x-linked gel water and 13,000 lbs. total sand.



Petroglyph Operating Co., Inc. Ute Tribal #33-10D3 (1979' FSL & 1980' FEL) NW SE Section 33 - 4S - 3W Antelope Creek Field Duchesne Co. Utah API #43-013-31935 : LEASE #14-20-H62-4736
--

Ute Tribal #33-14D3-Wellbore Diagram
After Conversion

Well History:

10/13/97 Spud Well

12/14/97 First Production

11/5/97 H2 Perf's, 6355 to 6358', 4 spf. also,
H1 Perf's, 6313 to 6317', 4 spf.
Broke down with acid and treated water.
Fraced with 360 bbls. x-linked gel water
and 41,800 lbs. total sand. Screened out.

11/12/97 D7.2 Perf's, 5514 to 5526', 4 spf.
Broke down with acid and treated water.
Fraced with 441 bbls. x-linked gel water &
gal. x-linked gel water and 87,000 lbs.
total sand. ISIP 3666 psi, 5min. 3200.

11/18/97 D7.11 Perf's, 5465 to 5473', 4 spf. also,
D7.1 Perf's, 5436 to 5440', 4 spf.
Broke down with acid and treated water.
Fraced with 347 bbls. x-linked gel water &
55,800lbs. total sand. Screened out.

11/24/97 D3.3 Perf's, 5252 to 5255', 4 spf
Broke down with acid and treated water.
Fraced with 191 bbls. x-linked gel water &
gal. x-linked gel water and 16,000 lbs.
total sand. Screened out.

12/2/97 C5.2 Perf's, 4953 to 4957', 4 spf.
Broke down with acid and treated water.
Fraced with 184 bbls. x-linked gel water
and 10,000 lbs. total sand. Screened out.

12/3/97 C4.2 Perf's, 4812 to 4816', 4 spf.
Broke down with acid and treated water.
Fraced with 9288 gal. x-linked gel water
and 35,000 lbs. total sand.

12/4/97 B10 Perf's, 4530 to 4536', 4 spf.
Broke down with acid and treated water.
Fraced with 314 bbls. x-linked gel water
and 47,000 lbs. total sand. Screened out.

12/4/97 B6.3 Perf's, 4343 to 4349', 4 spf. also,
B6.2 Perf's, 4330 to 4336', 4 spf.
Broke down with acid and treated water.
Fraced with 14,444 gal. x-linked gel water
and 78,400 lbs. total sand.

GL: 5889

KB: 5899

8 5/8" 24# Surface CSG @
443' KB cmt'd w/400 sxs

Surface Hole size 12 1/4"

Tubing: 45 jts of 2 7/8" @ 4510' KB

Hole Size 7 7/8" bit

Cement top @ 580' KB
5 1/2" 15.5# J-55 CSG @ 6453'
cmt'd w/585 sxs.

Casing Packer @ 4300'

Perf's:

B6.2	4330 to 4336'
B6.3	4343 to 4349'
B10	4530 to 4536'
C4.2	4812 to 4816'
C5.2	4953 to 4957'
D3.3	5252 to 5255'
D7.1	5436 to 5440'
D7.11	5465 to 5473'
D7.2	5514 to 5526'
H1	6313 to 6317'
H2	6355 to 6358'

PBTD @ 6365'
TD @ 6494' KB



(Not to Scale)

Petroglyph Operating Co., Inc.

Ute Tribal #33-14D3

(660' FSL & 1780' FWL)

SE SW Section 33 - 4S - 3W

Antelope Creek Field

Duchesne Co. Utah

API #43-013-31936 ; LEASE #14-20-H62-4736

**Ute Tribal #33-16D3-Wellbore Diagram
After Conversion:**

Well History:

11/15/97 Spud Well
12/23/97 First Production

12/5/97 H02 Perfs, 6418 to 6422', 4 spf.
Broke down with acid and treated water.
Fraced with 5,767 gal. x-linked gel water
and 29,000 lbs. total sand. ISIP 2715 psi.

12/5/97 D7.2 Perfs, 5660 to 5664', 4 spf.
Broke down with acid and treated water.
Fraced with 5,969 gal. x-linked gel water
and 27,400 lbs. total sand. ISIP 2829 psi.

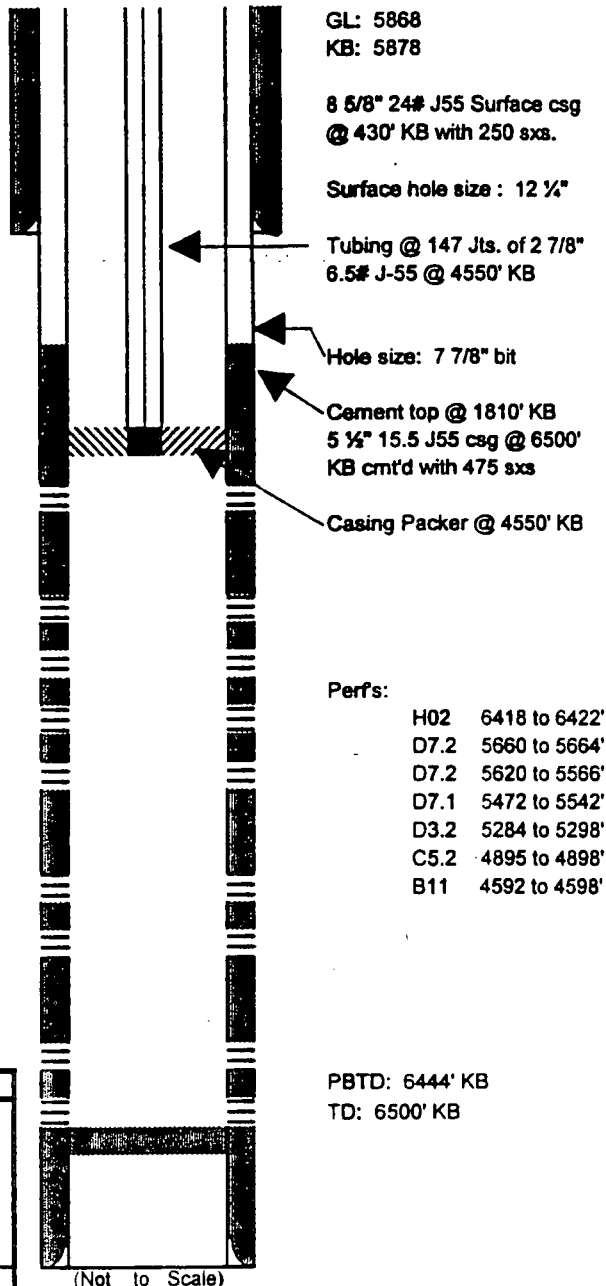
12/10/97 D7.2 Perfs, 5620 to 5566', 4 spf.
Broke down with acid and treated water.
Fraced with 915 bbls. x-linked gel water
and 176,600 lbs. total sand. ISIP 2357 psi.

12/15/97 D7.1 Perfs, 5472 to 5542', 4 spf.
Broke down with acid and treated water.
Fraced with 648 bbls. x-linked gel water
and 117,000 lbs. total sand. ISIP 2113 psi.

12/19/97 D3.2 Perfs, 5284 to 5298', 4 spf.
Broke down with acid and treated water.
Fraced with 794 bbls. x-linked gel water
and 157,000 lbs. total sand. ISIP 2370 psi.

12/20/97 C5.2 Perfs, 4895 to 4898', 4 spf.
Broke down with acid and treated water.
Fraced with 266 bbls. x-linked gel water
and 28,300 lbs. total sand. ISIP 2678 psi.

12/20/97 B11 Perfs, 4592 to 4598', 4 spf.
Broke down with acid and treated water.
Fraced with 298 bbls. x-linked gel water
and 47,000 lbs. total sand. ISIP 2550 psi.



Petroglyph Operating Co., Inc.
Ute Tribal #33-16D3 (662' FSL & 737' FEL) SE SE Section 33 - 4S - 3W Antelope Creek Field Duchesne Co. Utah API #43-013-31938 ; LEASE #14-20-H62-4736

APPENDIX C

II. WELL PLUGGING AND ABANDONMENT SCHEMATICS

**Ute Tribal # 33-08D3-Wellbore Diagram
Plugged**

Well History:

11/23/97 Spud Well
12/27/97 First Production

12/11/97 H02 Perfs, 6428 to 6432', 4 spf.
Broke down with acid and treated water.
Fraced with 300 bbls. x-linked gel water and
28,300 lbs. total sand. ISIP 2684 psi.

12/11/97 E01 Perfs, 5826 to 5832', 4 spf.
Broke down with acid and treated water.
Fraced with 318 bbls. x-linked gel water and
42,200 lbs. total sand. ISIP 2200 psi.

12/12/97 D7.2 Perfs, 5582 to 5610', 4 spf.
Broke down with acid and treated water.
Fraced with 810 bbl. x-linked gel water and
170,700 lbs. total sand. ISIP 2817 psi, 5 min. 2813.

12/15/97 D3.4 Perfs, 5324 to 5354', 4 spf. also,
D3.3 Perfs, 5311 to 5314', 4 spf.
Broke down with acid and treated water.
Fraced with 771 bbls. x-linked gel water and
151,800 lbs. total sand. ISIP 2113 psi.

12/15/97 C6.1 Perfs, 501 to 5006', 4 spf.
Broke down with acid and treated water.
Fraced with 323 bbls. x-linked gel water and
50,800 lbs. total sand. ISIP 1983' psi, 5 min 1888'.

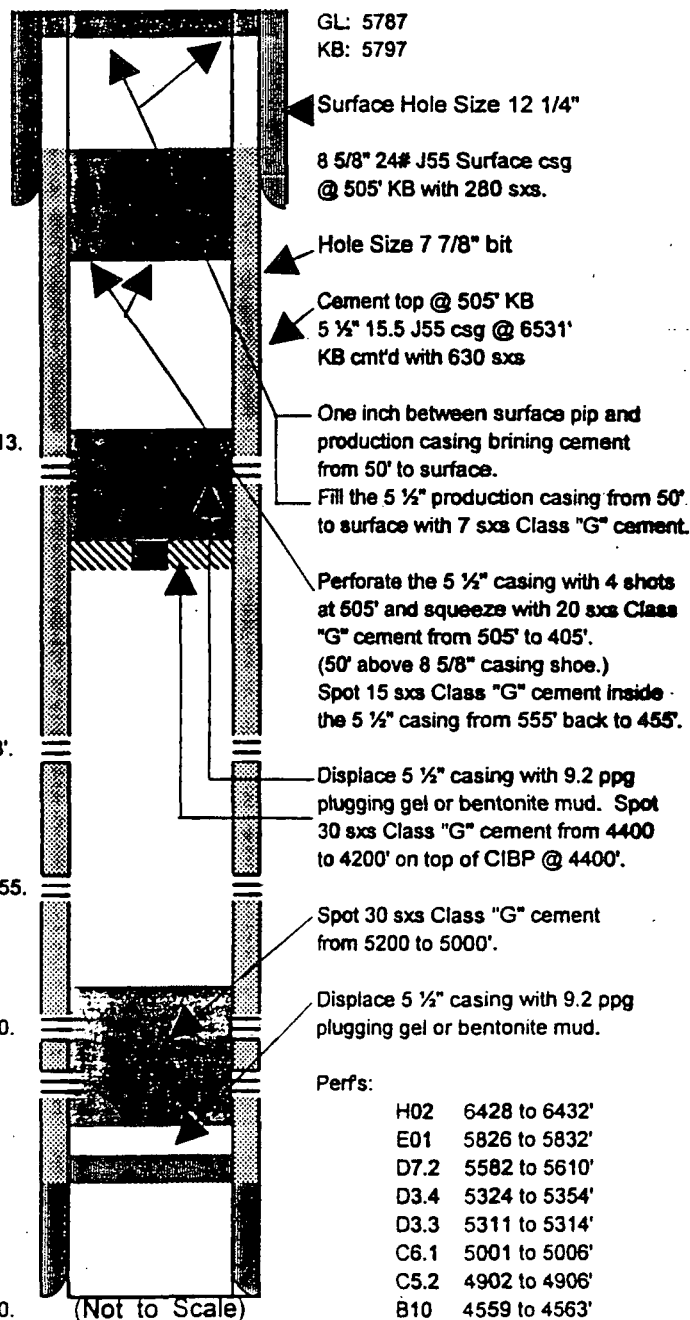
12/18/97 C5.2 Perfs, 4902 to 4906', 4 spf.
Broke down with acid and treated water.
Fraced with 245 bbls. x-linked gel water and
310,000 lbs. total sand. ISIP 2450' psi, 5 min. 1955.

12/18/97 B10 Perfs, 4559 to 4563', 4 spf.
Broke down with acid and treated water.
Fraced with 297 bbls. x-linked gel water and
43,000 lbs. total sand. ISIP 2659' psi, 5 min. 2560.

B8 Perfs, 4486 to 4496', 4 spf.
Broke down with acid and treated water.
Fraced with 3,000 gal. x-linked gel water and
13,000 lbs. total sand.

12/18/97 B6.3 Perfs, 4441 to 4445', 4 spf.
Broke down with acid and treated water.
Fraced with 244 bbls. x-linked gel water and
27,000 lbs. total sand. ISIP 3418' psi, 5 min. 3100.

12/18/97 B6.2 Perfs, 4343 to 4347', 4 spf.
Broke down with acid and treated water.
Fraced with 217 bbls. x-linked gel water and
27,600 lbs. total sand. ISIP 2100' psi, 5 min. 1980.



Perfs:

H02 6428 to 6432'
E01 5826 to 5832'
D7.2 5582 to 5610'
D3.4 5324 to 5354'
D3.3 5311 to 5314'
C6.1 5001 to 5006'
C5.2 4902 to 4906'
B10 4559 to 4563'
B8 4486 to 4496'
B6.3 4441 to 4445'
B6.2 4343 to 4347'

PBTD: 6470' KB
TD: 6570' KB

Petroglyph Operating Co., Inc. Ute Tribal #33-08D3 (1848' FNL & 762' FEL) SE NE Section 33 - 4S - 3W Antelope Creek Field Duchesne Co. Utah API #43-013-31956 : LEASE #14-20-H62-4736

**Ute Tribal # 33-10D3-Wellbore Diagram
Plugged**

Well History:

10/31/97 Spud Well
12/16/97 First Production

12/5/97 H02 Perfs, 6400 to 6403', 4 spf.
H01 Perfs, 6372 to 6378', 4 spf.
Broke down with acid and treated water.
Fraced with 9,400 gal. x-linked gel water and 50,900 lbs. total sand.
ISIP 3278 psi. 15 min 2226 psi.

THE FOLLOWING ZONES WILL
BE COMPLETED AT A LATER DATE

D7.21 Perfs, 5604 to 5611', 4 spf.
Broke down with acid and treated water.
Fraced with 420 bbl. x-linked gel water and 68,000 lbs. total sand.

D7.2 Perfs, 5538 to 5550', 4 spf.
Broke down with acid and treated water.
Fraced with 560 bbl. x-linked gel water and 102,000 lbs. total sand.

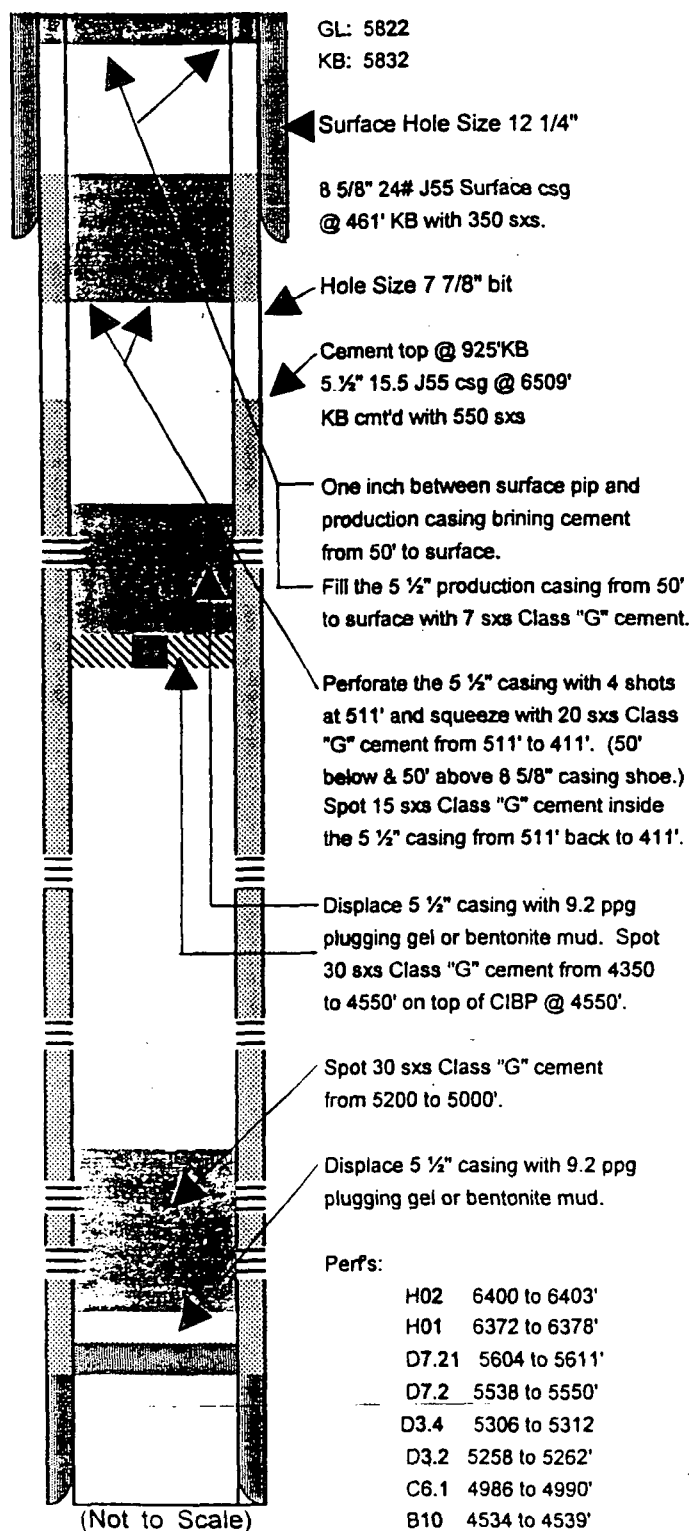
D3.4 Perfs, 5306 to 5312', 4 spf.
Broke down with acid and treated water.
Fraced with 280 bbl. x-linked gel water and 56,000 lbs. total sand.

D3.2 Perfs, 5258 to 5262', 4 spf.
Broke down with acid and treated water.
Fraced with 191 bbl. x-linked gel water and 28,000 lbs. total sand.

C6.1 Perfs, 4986 to 4990
Broke down with acid and treated water.
Fraced with 191 bbl. x-linked gel water and 28,000 lbs. total sand.

B10 Perfs, 4534 to 4539', 4 spf.
Broke down with acid and treated water.
Fraced with 191 bbl. x-linked gel water and 28,000 lbs. total sand.

B8 Perfs, 4476 to 4480', 4 spf.
Broke down with acid and treated water.
Fraced with 130 bbl. x-linked gel water and 13,000 lbs. total sand.



Petroglyph Operating Co., Inc.
Ute Tribal #33-10D3 (1979' FSL & 1980' FEL) NW SE Section 33 - 4S - 3W Antelope Creek Field Duchesne Co. Utah
API #43-013-31935 ; LEASE #14-20-H62-4736

PBTD: 6448' KB
TD: 6531' KB

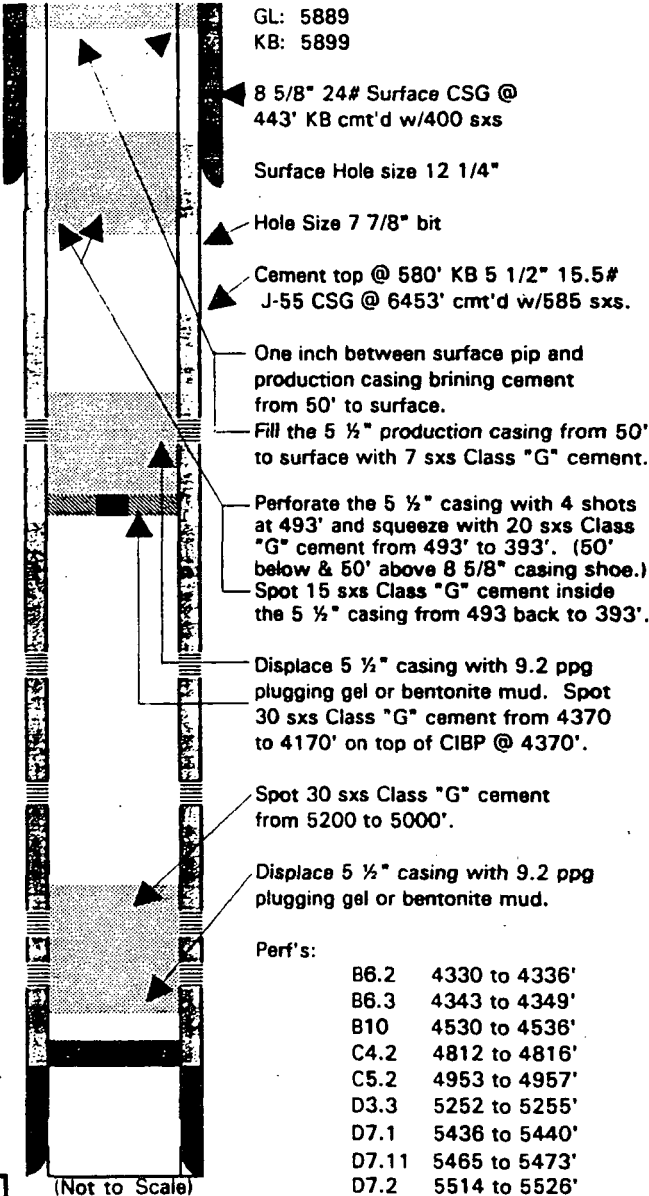
Ute Tribal #33-1403-Wellbore Diagram
Plug and Abandonment

Well History:

10/13/97 Spud Well

12/14/97 First Production

- 11/5/97 H2 Perf's, 6355 to 6358', 4 spf. also, H1 Perf's, 6313 to 6317', 4 spf. Broke down with acid and treated water. Fraced with 360 bbls. x-linked gel water and 41,800 lbs. total sand. Screened out.
- 11/12/97 D7.2 Perf's, 5514 to 5526', 4 spf. Broke down with acid and treated water. Fraced with 441 bbls. x-linked gel water & gal. x-linked gel water and 87,000 lbs. total sand. ISIP 3666 psi, 5min. 3200.
- 11/18/97 D7.11 Perf's, 5465 to 5473', 4 spf. also, D7.1 Perf's, 5436 to 5440', 4 spf. Broke down with acid and treated water. Fraced with 347 bbls. x-linked gel water & 55,800lbs. total sand. Screened out.
- 11/24/97 D3.3 Perf's, 5252 to 5255', 4 spf. Broke down with acid and treated water. Fraced with 191 bbls. x-linked gel water & gal. x-linked gel water and 16,000 lbs. total sand. Screened out.
- 12/2/97 C5.2 Perf's, 4953 to 4957', 4 spf. Broke down with acid and treated water. Fraced with 184 bbls. x-linked gel water and 10,000 lbs. total sand. Screened out.
- 12/3/97 C4.2 Perf's, 4812 to 4816', 4 spf. Broke down with acid and treated water. Fraced with 9288 gal. x-linked gel water and 35,000 lbs. total sand.
- 12/4/97 B10 Perf's, 4530 to 4536', 4 spf. Broke down with acid and treated water. Fraced with 314 bbls. x-linked gel water and 47,000 lbs. total sand. Screened out.
- 12/4/97 B6.3 Perf's, 4343 to 4349', 4 spf. also, B6.2 Perf's, 4330 to 4336', 4 spf. Broke down with acid and treated water. Fraced with 14,444 gal. x-linked gel water and 78,400 lbs. total sand.



Petroglyph Operating Co., Inc.

Ute Tribal #33-1403

(660' FSL & 1780' FWL)

SE SW Section 33 - 4S - 3W

Antelope Creek Field

Duchesne Co. Utah

API #43-013-31936 ; LEASE #14-20-H62-4736

PBTD @ 6365'
TD @ 6494' KB

**Ute Tribal # 33-16D3-Wellbore Diagram
Plugged and Abandonment**

Well History:

11/15/97 Spud Well

12/23/97 First Production

12/5/97 H02 Perfs, 6418 to 6422', 4 spf.
Broke down with acid and treated water.
Fraced with 5,767 gal. x-linked gel water
and 29,000 lbs. total sand. ISIP 2715 psi.

12/5/97 D7.2 Perfs, 5660 to 5664', 4 spf.
Broke down with acid and treated water.
Fraced with 5,969 gal. x-linked gel water
and 27,400 lbs. total sand. ISIP 2829 psi.

12/10/97 D7.2 Perfs, 5620 to 5566', 4 spf.
Broke down with acid and treated water.
Fraced with 915 bbls. x-linked gel water
and 178,600 lbs. total sand. ISIP 2357 psi.

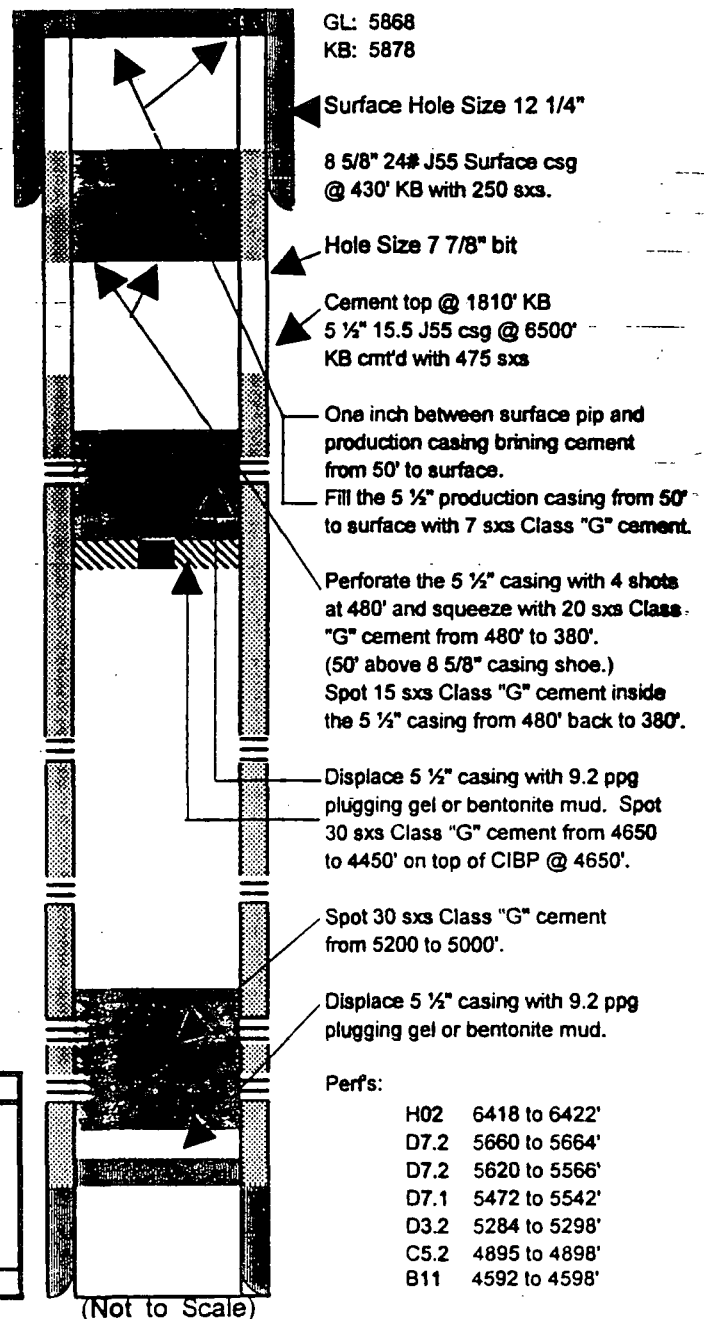
12/15/97 D7.1 Perfs, 5472 to 5542', 4 spf.
Broke down with acid and treated water.
Fraced with 648 bbls. x-linked gel water
and 117,000 lbs. total sand. ISIP 2113 psi.

12/19/97 D3.2 Perfs, 5284 to 5298', 4 spf.
Broke down with acid and treated water.
Fraced with 794 bbls. x-linked gel water
and 157,000 lbs. total sand. ISIP 2370 psi.

12/20/97 C5.2 Perfs, 4895 to 4898', 4 spf.
Broke down with acid and treated water.
Fraced with 266 bbls. x-linked gel water
and 28,300 lbs. total sand. ISIP 2678 psi.

12/20/97 B11 Perfs, 4592 to 4598', 4 spf.
Broke down with acid and treated water.
Fraced with 298 bbls. x-linked gel water
and 47,000 lbs. total sand. ISIP 2550 psi.

Petroglyph Operating Co., Inc. Ute Tribal #33-16D3 (662' FSL & 737' FEL) SE SE Section 33 - 4S - 3W Antelope Creek Field Duchesne Co. Utah API #43-013-31938 ; LEASE #14-20-H62-4736



PBTD: 6444' KB
TD: 6500' KB



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 8
999 18TH STREET - SUITE 300
DENVER, CO 80202-2466

JAN 4 2001

Ref: 8P-W-GW

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Micheal Safford
Operations Coordinator
Petroglyph Operating Company, Inc.
P.O. Box 607
Roosevelt, UT 84066

Re: AUTHORIZATION TO COMMENCE INJECTION
Ute Tribal #19-05 (UT04535)
Antelope Creek Field
EPA AREA PERMIT UT2736-00000
Duchesne County, Utah

Dear Mr. Safford:

Thank you for submitting information pertaining to Ute Tribal #19-05 to the Environmental Protection Agency (EPA) Region VIII Ground Water Program. Requirements of UIC Area Permit UT2736-00000 Part II Sections (C)(2) "Prior To Commencing Injection" required submittal of the following information:

1. Well Rework Record (EPA Form 7520-12) with after conversion well schematic; and
2. a successfully run Mechanical Integrity Test (MIT) with pressure chart; and
3. injection zone fluid pore pressure survey.

All required information has been submitted, and has been reviewed and approved by the EPA. Petroglyph has complied with all pertinent conditions of UIC Area Permit UT2736-00000 Part II Section (C)(2). Therefore, effective upon your receipt of this letter, Administrative approval hereby is granted for injection into the Ute Tribal #19-05 under the conditions of UIC Area Permit UT2736-00000. The Director has determined that the maximum surface injection pressure for the Ute Tribal #19-05 shall not exceed 1900 psig.





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 8
999 18TH STREET - SUITE
DENVER, CO 80202-246

JAN 4 2001

Ref: 8P-W-GW

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Micheal Safford
Operations Coordinator
Petroglyph Operating Company, Inc.
P.O. Box 607
Roosevelt, UT 84066

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Antelope Creek Field
EPA AREA PERMIT UT2736-00000
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*Scan under
UT30736 - 04535
220 Authorization &
Inject - Final 1/4/2001*



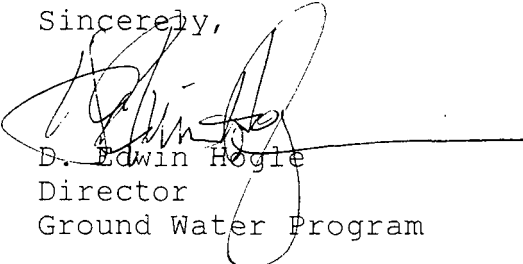
Please be reminded that it is the responsibility of the permittee to be aware of, and to comply with, all conditions of the Permit. Effective upon receipt of this letter, EPA administration of this well is transferred to Mr. Al Craver, Compliance Officer in the Office of Enforcement, Compliance, and Environmental Justice Technical Enforcement Program, who is your point of contact for routine compliance matters and reports.

Please send all reporting forms and other required correspondence to Mr. Craver at the address listed below, referencing **EPA WELL ID: UT04535** on all reports and correspondence.

Mr. Al Craver,
Technical Enforcement Program, Mail Code 8ENF-T
U.S. Environmental Protection Agency
999 18th Street, Suite 300
Denver, Colorado, USA, 80202-2466

If you have any questions concerning this authorization or the Permit, please contact Mr. Dan Jackson of my staff at 303.312.6155 or Mr. Craver at 303.312.7821.

Sincerely,



D. Edwin Hogle
Director
Ground Water Program

cc: Mr. Roland McCook, Chairman
Uintah & Ouray Business Committee
Ute Indian Tribe

Ms. Elaine Willie, Environmental Director
Ute Indian Tribe

Mr. Norman Cambridge
BIA - Uintah & Ouray Agency

Mr. Gil Hunt
State of Utah Natural Resources
Division of Oil, Gas, and Mining

Mr. Jerry Kenczka
BLM - Vernal District Office

SENDER: 01/04/01 CW 3901C - 3904C

- Complete items 1 and/or 2 for additional services.
- Complete items 3, 4a, and 4b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):

- ☐ Addressee's Address
- ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to: Original Green Card
Mr. Micheal Safford JAN 4 2001
 Operations Coordinator
 Petroglyph Operating Co., Inc.
 P.O. Box 607
 Roosevelt, UT 84066

4a. Article Number
Z 159 952 271

4b. Service Type
☐ Registered ☒ Certified
☐ Express Mail ☐ Insured
☐ Return Receipt for Merchandise ☐ COD

7. Date of Delivery
1-9-01

5. Received By: (Print Name)
[Signature]

6. Signature: (Addressee or Agent)
X

8. Addressee's Address (Only if requested and fee is paid)
[Signature]
JAN 16 2001

PS Form 3811, December 1994 102595-97-B-0179 Domestic Return Receipt

- 1/04/01 to Micheal Safford
 (Certified letters mailed together)
 (#3901C, 3902C, 3903C & 3904C)
 Original green card #3901C
- UTE TRIBAL #19-05 (UT2736-04535)
 - UTE TRIBAL #19-15 (UT2736-04496) (3902C)
 - UTE TRIBAL #30-16 (UT2736-04417) (3903C)
 - UTE TRIBAL #30-06 (UT2736-04578) (3904C)

Z 159 952 271

US Postal Service 01/04/01 CW 3901C-3904C
Receipt for Certified Mail
 No Insurance Coverage Provided.
 Do not use for International Mail (See reverse)

Sent to	Mr. Micheal Safford
Street & Number	Operations Coordinator
Post Office, State, & ZIP Code	Petroglyph Operating Co., Inc.
Postage	P.O. Box 607
	Roosevelt, UT 84066
Certified Fee	ORIGINAL GREEN CARD
Special Delivery Fee	UTE TRIBAL #19-05
Restricted Delivery Fee	(UT2736-04535)
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Addressee's Address	
TOTAL Postage & Fees	\$
Postmark or Date	

PS Form 3800, April 1995

Z 159 952 271

US Postal Service 01/04/01 CW 3901C-3904C
Receipt for Certified Mail
 No Insurance Coverage Provided.
 Do not use for International Mail (See reverse)

Sent to	Mr. Micheal Safford
Street & Number	Operations Coordinator
Post Office, State, & ZIP Code	Petroglyph Operating Co., Inc.
Postage	P.O. Box 607
	Roosevelt, UT 84066
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Restricted Delivery Fee	(UT2736-04535)
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Addressee's Address	
TOTAL Postage & Fees	\$
Postmark or Date	

PS Form 3800, April 1995

UIC Permit Routing Slip

Date: 12/28/00

Action: **AUTHORIZATION TO INJECT**

To:	Mailcode	Initials	Date
1. Permit Writer <u>Chuck Williams</u>	8P-W-GW	<u>CW</u>	<u>12/28/00</u>
2. Technical Review <input type="checkbox"/> DWJ <input checked="" type="checkbox"/> PSO <input type="checkbox"/> CT	8P-W-GW	<u>X</u>	<u>1/3/2001</u>
3. L. Clutts proof read	8P-W-GW	<u>LC</u>	<u>1/03/01</u>
4. D. Hogle SIGNATURE	8P-W-GW	<u>DH</u>	<u>1/2/01</u>
5. L. Clutts date stamp & mail documents	8P-W-GW	<u>LC</u>	<u>1/4/01</u>
6. Permit Writer <u>CW</u> make copies	8P-W-GW	<u>CW</u>	<u>1/4/01</u>
7. L. Clutts mail copies	8P-W-GW	<u>LC</u>	<u>1/04/01</u>
8. Permit Writer <u>CW</u> File	8P-W-GW	<u>CW</u>	<u>4/17/01</u>

Well Name: Ute Tribal #19-05 Reservation: U-O

UIC Permit Number: UT 2736-04535 Applicant: Petroglyph

Contents of routing package for: AUTHORIZATION TO INJECT

LEFT SIDE

- Concurrence copy of Authorization
- Reading File copy of Authorization
- Prior to Injection Requirements - Submitted Documentation
- FORM 3
- Mailing List

RIGHT SIDE

- Authorization To Inject (Signature)

COMMENTS _____

Permit Writer: CW Williams



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 8
999 18TH STREET - SUITE 300
DENVER, CO 80202-2466

JAN 4 2001

CONCURRENCE COPY

Ref: 8P-W-GW

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Micheal Safford
Operations Coordinator
Petroglyph Operating Company, Inc.
P.O. Box 607
Roosevelt, UT 84066

Re: AUTHORIZATION TO COMMENCE INJECTION
Ute Tribal #19-05 (UT04535)
Antelope Creek Field
EPA AREA PERMIT UT2736-00000
Duchesne County, Utah

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Concur

CEW
12/28/00

colore
1/3/2001
8P-W-GW

8P-W-GW
1/03/01 LG
mailed
1/04/01 LG

Hof
SPW
1/31/01



Printed on Recycled Paper

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Technical Enforcement Program, Mail Code 8ENF-T
U.S. Environmental Protection Agency
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Denver, Colorado, USA, 80202-2466

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Sincerely,

D. Edwin Hogle
Director
Ground Water Program

cc: Mr. Roland McCook, Chairman
Uintah & Ouray Business Committee
Ute Indian Tribe

Ms. Elaine Willie, Environmental Director
Ute Indian Tribe

Mr. Norman Cambridge
BIA - Uintah & Ouray Agency

Mr. Gil Hunt
State of Utah Natural Resources
Division of Oil, Gas, and Mining

Mr. Jerry Kenczka
BLM - Vernal District Office